ROLE IMPORTANCE, AFFECTIONAL SOLIDARITY, AND DEPRESSION AMONG
FAMILIAL CAREGIVERS FOR OLDER ADULTS

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In the United States, familial caregivers provide approximately 80% of the long term elderly care and are at risk for mental health problems. As family members provide care, relationships shift from mutual support to increasing dependency on the caregivers, who in turn often experience a shift in self-concept from their prior relational role to include identification as caregiver for the care recipient. Affectional solidarity, or emotional relationship quality, can influence how caregivers experience their shifting role in relationship to a loved one. The study examined whether role importance is associated with caregiver depression over time, and tested the moderating role of affectional solidarity in this association. A subset of caregivers ($N = 57$) from the Longitudinal Study of Generations constituted the sample from which role importance, affectional solidarity, and Center for Epidemiological Studies Depression reports were analyzed using longitudinal hierarchical regression. Findings did not support hypotheses. Results suggested that affectional solidarity may be important to consider among familial caregivers as a potential protective factor for depression. Implications for future research and practitioners are discussed.
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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

The importance of family in meeting the daily caregiving needs of older adults on an ongoing basis has been recognized as a crucial component of the public care system in the United States (Fingerman & Birditt, 2011; Parrot & Bengston, 2001). Approximately 80% of the long term care for chronically ill, frail or disabled older adults in the United States is provided by familial caregivers. If provided by professionals, this service would total over $300 billion annually (Montgomery et al., 2007), which translates to 6% of national yearly health care costs (Arno, 2006). Yet, familial caregivers who bear the weight of this burden are at risk for poor mental health and well-being (Gaugler et al., 2005). In order to support informal familial caregivers and allow them to continue providing essential care to our aging population, more research is needed to identify the determinants of their mental health.

The purpose of the current study is to examine factors that may influence caregivers’ experience through exploration of associations between importance of the familial role in relation to care recipient, emotional closeness to the care recipient, and depression. The study will use a longitudinal data set collected at two different time points to investigate how role importance influences mental health of caregivers in light of the emotional relationship quality with care recipient. Specifically, this study examined how affectional solidarity moderates the relationship between importance of the familial role and caregiver depression over time.

Relevant literature is reviewed with respect to the theoretical frameworks for familial caregiver stress and coping outlined by Gatz, Bengtson and Blum (1990) and Pearlin, Mullan, Semple and Skaff (1990).

Gatz et al.’s (1990) framework outlines a path to caregiver outcomes that acknowledges
the role of familial solidarity as it influences the impact of the dual stressors of care-recipient health problem and caregiving problems (i.e., changes that occur in caregiver’s life as result of care-recipient care needs) on caregiver outcomes. Care recipient symptoms, care needs, and coping skills operate in a dyadic relationship with competing role demands of the caregiver, caregiver appraisals, social support, and available resources to shape the caregiving process (Gatz et al., 1990). This study emphasizes one side of the dyadic caregiving process: caregiving stressors and the impact on caregiver outcomes; however, it should be noted that, although less attention is afforded care-recipient processes in the current study, caregiving is colored by the nature of the condition that prompted the care recipient’s need for care and individual care-recipient characteristics. According to the framework proposed by Gatz et al. (1990), familial role importance serves as a contextual stressor which influences outcomes for caregivers, whereas emotional relationship quality, or familial solidarity, can be viewed as a social support resource that moderates the relationship between caregiver stressors and outcomes.

Similarly, Pearlin et al. (1990) proposed a conceptual model of caregiver stress that includes caregiver relationship to care recipient (e.g., spouse, son), subjective stressors like overload and relational deprivation (e.g., alteration of prior familial relationship with care recipient, potential loss of reciprocity, and limited social contact outside of caregiving), family and role conflicts, intrapsychic strains, akin to caregiver appraisals of self in caregiving role, and mediators such as social support and coping that influence caregiver outcomes such as depression. The model also includes contextual socioeconomic factors, objective care recipient symptoms and behaviors, and economic resources which contribute to caregiver outcomes.

The framework proposed by Pearlin et al. (1990) would likely situate both familial role importance and relationship quality with care recipient as contextual variables within which the
caregiving stress process unfolds. However, Gatz et al.’s (1990) framework might situate the facets of familial solidarity amidst the social support resources within the caregiving stress process. Consistent with the framework proposed by Pearlin et al. (1990), the proposed study considers role importance and affectional solidarity as predictors of caregiving outcomes that interact. In addition, consistent with Gatz et al.’s (1990) model, this study examines affectional solidarity as a moderator that interacts with caregiver perception of familial role importance to both amplify and buffer caregiver depression.

Caregiving: The Phenomenon

Before examining the factors that compose the aforementioned models, it is important to have an understanding of the context within which the proposed caregiving process unfolds. Montgomery et al. (2007) define the caregiving role as the provision of care for frail, ill or disabled relatives. Caregiving tasks have been described as physically taxing, time-consuming, distasteful and emotionally challenging (Fingerman & Birditt, 2011). The caregiving referred to in this study goes beyond the basic behavioral and affective aspects of all close relationships, which include provision of care for loved ones, such as between spouses or from parents to children (Pearlin, Mullan, Semple & Skaff, 1990). Gatz et al. (1990) refer to the caregiving situation as patterns of assistance that have been altered as a result of the older individual’s increased dependency. Assistance provided by individuals who are intimate with the dependent person and who are not trained to provide care, such as caregiving by family or neighbors, is referred to as informal caregiving (Carretero, Garces, Rodenas & Sanjose, 2009). Informal caregivers also provide care without compensation and are more commonly women, but also increasingly men, later in the life course (Montgomery et al., 2007).
What is required of caregivers varies with the individual needs of the care recipient, ranging from assistance with activities of daily living (ADLs), instrumental activities of daily living (IADLs), social and emotional support as well as coordination of care (Montgomery et al., 2007). ADLs include basic self-care tasks such as bathing and dressing, whereas IADLs might include grocery shopping, managing finances and meal preparation (Wilson, Rochon, Mihailidis & Leonard, 2012). Caregiving tasks also may entail constant supervision, maintenance of an appropriate and safe environment, behavior management, managing paperwork, as well as making decisions that the care-recipient is no longer able to make for himself or herself (Plank, Mazzoni & Cavada, 2012).

Caregiving is a process that typically develops gradually over the course of many years through a cumulative process of increasing dependence on the caregiver that is determined by greater care needs of a family member with dementia, chronic illness or other debilitating condition, and resulting disability and/or frailty (Fingerman, Hay, Kamp Dush, Cichy & Hosterman, 2007; Pinquart & Sorenson, 2007). However, the caregiving role can arise more suddenly, as is the case when family members are discharged from the acute care or rehabilitation hospital home after a fall or stroke (Plank et al., 2012). When caregiving shifts from typical exchanges of support to an unequal distribution of dependence and burden upon the caregiver, family caregivers often express concerns about various aspects of caregiving and coordination of care (Pearlin et al., 1990; Plank et al., 2012). The period of caring for aging parents or other family members is relatively short with respect to the entirety of adult relationships between family members (Fingerman & Birditt, 2011). As parent-child relationships are often reciprocal, parents may still provide material, emotional, or social support
for their offspring during the time they receive hands-on care from children (Lowenstein & Daatland, 2006).

Usually, one family member serves as the primary caregiver for an impaired older relative, while others within the family or kin network may provide secondary caregiving support. Previous research suggests that spouses, when able, are the most likely family members to serve as primary caregivers (Montgomery et al., 2007). In the past decade, however, as a result of increased longevity and divorce, there has been a shift toward adult children as the most prevalent sources of primary familial care in the nation (Wolff & Kasper, 2006; Swarz, 2009). Of adult children, daughters are two times as likely as sons to provide primary caregiving support to aging parents. Gender norms are influential in the assignment of caregiving roles, and this can be seen in recent data citing that daughters-in-law, not sons, are the next most likely to provide care to aging family members, after daughters (Montgomery, et al., 2007). Furthermore, caregiving tasks are divided differentially according to gender. For example, research indicates that sons more commonly assist aging parents with IADLs, while daughter-in-laws more commonly provide personal care and household chore support (Youn, Knight, Jeong & Benton, 1999).

In addition, Gatz et al. (1990) point out that recent trends in familial structure have led to the evolution of increasingly verticalized families (e.g., families where 4, 5, or 6 generations are alive at the same time with fewer members in each generation). Thus, more and more grandchildren will take part in caring for their grandparents and older generations (Gatz et al., 1990).

Family structure also plays a role in who ultimately assumes the role of primary caregiver for older family members. For example, adults endorse greater feelings of obligation to provide support to biological parents than stepparents (Ganong & Coleman, 1999). Within the United
States, there is variation in caregiving norms based on culture and ethnicity. Compared to White Americans, Black and Hispanic Americans report higher normative experiences of obligation to provide support to parents as they age (Swartz, 2009). Normative patterns of caregiving support and obligation need to be considered within the broader social context. Patterns observed in the United States may not apply in cultures with more formal support structures, such as countries that provide more extensive governmental services for older adults (Fingerman & Birditt, 2011).

In addition to caregiving norms with respect to feelings of obligation, the individual who provides care also varies according to ethnicity. Daughters are more commonly caregivers in Hispanic and Black populations, although, this effect is moderated by income with higher income Hispanic and Black daughters no more likely to provide care than White caregivers (Montgomery et al., 2007).

Influence of Caregiver Characteristics

Demographic and social characteristics of caregivers contribute to the context of caregiving within which subjective caregiving processes and objective care recipient needs interact to create each individual caregiver’s experience. For example, Lee et al. (2001) found that relationship to the care recipient predicted caregiver stress, with spouses reporting the greatest distress, followed by daughters-in-law, sons and daughters. Caregiver age also appears influential. Younger caregivers reported greater fatigue as a result of caregiving than older caregivers, possibly due to the increased role strain experienced by younger caregivers who are employed with younger families (Gaugler et al., 2005). Geographic location of residence may also influence appraised caregiving stress, as suggested by findings that rural familial caregivers report lower appraised caregiving stress than urban caregivers (Lee et al., 2001). In another investigation, caregivers with less education reported more depression than those who had more
education (Alspaugh et al., 1999). Research also indicates that household income is associated with variations in life satisfaction, depression and physical health among caregivers (Lee et al., 2001).

Research suggests a number of differences between male and female caregivers. For example, male caregivers report lower levels of depression and caregiver burden, as well as greater well-being and physical health compared to female caregivers (Pinquart & Sörensen, 2006). Caregiving men are also more likely to engage in self-care and preventative health behaviors than women (Burton, Newsom, Schulz, Hirsch & German, 1997). In contrast, women caregivers of cancer patients reported greater feelings of role captivity than men (Gaugler et al., 2005). In addition, health promoting resources are less accessible to female caregivers, and they have less control over their caregiving responsibilities due to limited access to material, social and political resources (Hawranik & Strain, 2002; Oxall & Cook, 1998; Shaw, 1992). It is not surprising, then, that women experience more caregiving stress and poorer mental health than men (Amirkhanyan & Wolf, 2003).

There are mixed findings regarding whether the experience of caregiver stress and depression varies by race (Connidis, 2010). Roth, Ackerman, Okonkwo, and Burgio (2008) found that Hispanic caregivers for individuals with dementia reported more depression than White or African American caregivers. Additionally, African American caregivers reported greater well-being and lower depressed affect than white caregivers (Roth et al., 2008). Other studies found similar levels of stress among caregivers of different races (Aranda & Knight, 1997; Bowman et al., 1998). Reasons for caregiver stress may vary by race due to differential life circumstances, and sociocultural context can influence the expression of caregiver outcomes (Connidis, 2010).
Time conflicts with paid employment among caregivers for older family members can create financial burden. Caregivers often experience reduced income as a result of time spent providing care as well as care-related expenses. This financial strain can be particularly challenging for female caregivers who already face reduced access to financial resources (Gahagan, Loppie, Rehman, Maclellan, Side, 2007).

Caregiver personality also influences how the role of caregiver is experienced. Löckenhoff, Duberstein, Friedman and Costa (2011) found that greater caregiver neuroticism was related to lowered mental and physical health. Extraversion and openness were associated with physical health, while agreeableness and conscientiousness were associated with mental health in the same sample. Additionally, Saad et al. (1995) found caregivers with more cognitive empathy (i.e., identification and understanding of the emotions of another), who maintained objective distance to prevent the vicarious experience of another’s emotions, showed lower appraisals of caregiver stress and depression and increased life satisfaction when compared with caregivers reporting less cognitive empathy.

Furthermore, length of care influences caregiver feelings of being trapped in the caregiving role. Among caregivers for family members with cancer, shorter periods of care were associated with greater feelings of role captivity (Gaugler et al., 2005). While this might appear counterintuitive, Gaugler et al. (2005) discussed the adaption of caregivers over time, proposing that stress abates as caregivers become more familiar with the tasks of caregiving. Evidence suggests caregivers are more able to tolerate caregiving tasks, experience reduced burden, and show improved mental health over time (Clyburn, Stones, Hadjistavropoulos & Tuokko, 2000; Zarit et al., 1986). Therefore, to increase understanding of the extent and scope of caregiver outcomes, examination of caregiver experiences over time is essential.
Influence of Care Recipient Characteristics

Characteristics of care recipients also influence the impact of caregiving on subjective stress and depression experienced by familial caregivers. The condition that results in need for care influences outcomes for caregivers. For example, when compared with other caregivers those providing care for family members with dementia reported greater impact on family, work and other social roles in addition to greater depression, anxiety and distress (Michon, Weber, Rudhard-Thomazic, & Giannakopoulos, 2005). Among a sample of family caregivers for Alzheimer’s patients, increased behavioral pathology by the care recipient was associated with caregiver stress (Harwood et al., 2000). Danhauer et al. (2004) found increased depression in caregivers for Alzheimer’s patients that had behavioral disturbances, with the greatest association with aggressive behavior.

Longitudinal changes in the needs of care recipients can increase caregiver stress, and increases in care recipient behavioral problems were associated with greater caregiver depression over one year (Smith, Williamson, Miller, & Schulz, 2011). In contrast, Danhauer et al. (2004) reported no increase in caregiver depressive symptoms over time despite increased behavioral disturbances among care-recipients. This may be due to caregiver adjustment to caregiving tasks and associated increases in caregiving self-efficacy as discussed by Gaugler et al. (2005).

Demographic characteristics of care recipients also contribute to the context of caregiving for caregivers. For example, Gaugler et al. (2005) reported that caregivers of care recipients with higher incomes reported reduced feelings of role captivity. In contrast, caregivers of employed care recipients reported increased experience of role captivity. Amirkhanyan and Wolf (2003) found that parental needs themselves, independent of actual caregiving, are associated with depression scores among both caregiving and non-caregiving children of a parent receiving care.
Whereas no relationship between caregiving and depression emerged among caregivers and noncaregivers for a relative with minimal care needs; noncaregivers of family members with significant care needs showed increased depression (Amirkhanyan & Wolf, 2003).

Caregiving: The Phenomenology

Throughout the caregiving process, changes in both caregiver and care recipient feelings, health, and needs impact and alter the initial familial relationship between care recipient and caregiver (Montgomery et al., 2007). As a result, caregiving is a dynamic, subjective process that is influenced by both objective and subjective aspects of the caregiver’s experience. Multiple subjective factors have been identified that influence the caregiving experience including appraisal of the caregiving role (stress, role overload and captivity, self-efficacy for caregiving, perceived social support), role importance and strain, and quality of relationship between caregiver and care recipient (Alspaugh, Stephens, Townsend, Zarit, & Greene, 1999; Lee, Brennan, & Daly, 2001; Montgomery et al., 2007; Silverstein, Parrott, & Bengtson, 1999). Each factor identified above must be considered in the light of multiple objective factors including the health and functional status of the care recipient and available resources (Alspaugh et al., 1999). Gatz et al. (1990) refers to these subjective aspects of caregiving as the caregiving problem (i.e., changes that occur in the life of the caregiver as a result of care recipient needs), and this will be the focus of the proposed study.

Ambivalence

Connidis (2010) described intergenerational ambivalence as those contradictions within parent-child ties that influence the subjective, psychological and sociological implications of caregiving. Psychological ambivalence involves contradictions individuals experience as both positive and negative emotions about familial relationships surface (Connidis, 2010).
Ambivalence regarding the adoption of a caregiving role is an important concept because it influences the decision to provide care as well as the caregiving experience for children and other family members (Lang, 2004). As family members confront their older relative’s increasing need for care, mixed feelings arise and can impact caregiver’s desire to help, particularly when caregivers are faced with the challenge of meeting other responsibilities such as work, children, spouse and other social relationships (Lang, 2004). Heightened role strain has been identified among adult child caregivers who are required to juggle divided loyalties to parents in need of increasing care, professional roles and parenting responsibilities to their own children (Rolland, 2003). In addition to psychological and intergenerational ambivalence, sociological ambivalence refers to conflicting thoughts about caregiving that occur when existing social structures fail to provide guidelines for behavior or relationships. This type of ambivalence is experienced by caregivers when incompatible expectations are placed on them by competing demands of caregiving for older family members, parenting, and supporting the family financially (Fingerman & Birditt, 2011).

**Role Captivity and Overload**

Role captivity is a subjective stressor characterized by feelings that the caregiving role is inescapable and involuntary. Subjective stress in the form of role captivity and role overload has been identified among informal caregivers for family members with cancer (Gaugler et al., 2005). Alspaugh et al. (1999) examined subjective facets of the caregiving experience and the development of depressive symptoms across one year among caregivers of dementia patients. Caregivers reporting lower levels of role captivity were less likely to endorse depressive symptoms one year later than those who reported higher levels of role captivity (Alspaugh et al., 1999).
Role overload, another subjective stressor experienced by caregivers, refers to exhaustion as the result of caregiving captivity that negatively impacts not only mental health, but also physical health (Alspaugh et al., 1999). This is likely due to the demands of providing care that may leave little time for self-care or preventative health behaviors such as regular exercise and rest which ultimately contribute to poor health outcomes for caregivers over time (Montgomery et al., 2007; Vitaliano, Young & Zhang, 2004).

The Route to Familial Caregiving

How do family members transition from prior familial roles, such as spouse or adult child, into the role of caregiver, which can lead to role overload or captivity? Merrill (1997) outlined multiple pathways to caregiving based on family dynamics. In some families, a parent selects a child to provide care under the assumption that the chosen caregiver is able and willing to perform the caregiving. Some siblings divide parental caregiving tasks, whereas de facto caregivers assume the role because no one else appears available or able to provide the necessary care. Even among families where there is one primary caregiver identified, adult children typically receive assistive support for caring from other members of the family such as siblings, spouses, and their own children (Sims-Gould & Martin-Matthews, 2007). Although, conflict between siblings often occurs or is intensified in the midst of caregiving for aging parents, relationships between caregivers and their spouse and/or children often remain without such conflict (Smith, Smith & Toseland, 1991). The interaction of dyadic and systemic interrelatedness within the family system is complex and merits attention in the study of factors that contribute to caregiving transitions such as relationship quality, historical family dynamics and ambivalence.
Along with the interaction between individual care recipient and caregiver characteristics, the relationship between caregiver and care recipient is a factor that shapes how the caregiving role is experienced (Connidis, 2010; Gatz et al., 1990; Silverstein et al., 1995). However, over time, the caregiving relationship can evolve from the initial familial relationship if the care recipient is less able to communicate or recognize the caregiver as is the case with dementia (Montgomery et al., 2007). Changes within the relationship can include domination of functional caregiving tasks to the exclusion of other relational functions, a shift from reciprocity, and even a shift from mutual to one-way affection (Lyons, Zarit, Sayer & Whitlatch, 2002).

When these changes occur, a shift takes place in not only the caregiver’s role identity, but also in the experience of the relationship. Caregivers may be faced with ambivalent feelings when they recognize the loss of the care recipient as he or she once was, despite continued need for care (Connidis, 2010). The caregiver might face the additional task of grieving the lost relationship with the family member for whom he or she provides care (Meuser & Marwit, 2001). For example, Smith et al. (1991) describe a caregiving daughter’s experience of coming to terms with the fact that her mother will no longer be a source of emotional support. Furthermore, within the context of caregiving and associated stressors, unresolved conflict among family members often surfaces, effectively creating another emotional hurdle for caregivers to navigate (MacRae, 1998; Smith et al., 1991). Three topics of disagreement common to this type of intrafamilial conflict around caregiving include a) beliefs about the seriousness of the care recipient’s disability and the best approach to deal with the disability, b) the amount and quality of care provided to the care recipient and by whom, and c) the amount of recognition provided to the caregiver for assuming that role (Pearlin et al., 1990).
Role Adjustment

Adjustment to changes in familial roles is a challenging task families undertake when a family member requires informal caregiving (Hertzberg & Ekman 2000; Sandberg, Nolan & Lundh, 2002; Smith et al. 2004). Plank, Mazzoni, and Cavada (2012) elaborated on qualitative experiences of new caregivers during transition from hospital to home and identified a recurrent theme of being overwhelmed with responsibility. Not only were caregivers responsible for care tasks, but also previous roles and responsibilities, many of which had formerly belonged to the care recipient. The initial period of role transition is marked by significant emotional stress for caregivers and the emotional overload is greater for those who are new to their role as caregiver (Plank et al., 2012). In addition, Pearlin and colleagues (1990) described parallel shifts which occur alongside the multiple and increasing demands of the caregiving situation, such as the adjustment to a new sense of self as caregiver, which can reduce positive perceptions of the self. This process increases caregivers’ vulnerability to negative effects of stress, such as depression (Pearlin et al., 1990).

Plank and colleagues (2012) identified three levels of caregiver experience: individual, interpersonal, and organizational. The individual level refers to the newly acquired family caregiving role, the interpersonal level refers to the caregiver’s focus on the care recipient’s condition, and the organizational level refers to the broader array of required support that allows caregivers to successfully undertake caregiving tasks. Plank et al.’s (2012) qualitative findings indicated that at the individual level, caregivers appeared willing to assume caregiving responsibilities and articulated courage, hope and confidence regarding their caregiving role. However, consistent with prior research, these positive emotions were juxtaposed against doubt, uncertainty and worry about their caregiving ability, as well as a perceived lack of information which contributed to the continual experience of ambivalence among caregivers (Connidis, 2010;
Interpersonal concerns revolved around the frailty and dependency of the care recipient, which served as a catalyst for role transformations within the family because a crucial source of support has become someone who requires increased support and may be unable to provide any in return. Organizational level anxieties were focused on the familial and social support required in order to maintain care for the care recipient, and often caregivers did not ask for help but instead waited for help to be offered. At times, caregivers reported feelings of being abandoned and alone when support was not offered (Plank et al., 2012). This experience is consistent with reported conflict between adult-child caregivers and their siblings who are perceived as not pulling their weight in providing care for aging parents (Smith, Smith & Toseland, 1991).

These experiences within the context of caregiving are stressful and limit caregivers’ ability to develop and maintain a positive self-concept as a sibling, child, grandchild, or spouse (Pearlin et al., 1990). Pearlin and colleagues (1990) described four factors that contribute to the effects of stress on sense of self in the context of caregiving: a) role captivity, or feelings of obligation to serve as caregiver in the face of desires to be fulfilling other roles, b) loss of self (i.e., identity shifts that occur due to the loss of the previous relationship with the care recipient who no longer is as he or she once was and/or reduced time spent with other family members because of increased caregiving demands), c) competence, or how well caregivers feel they perform the caregiving role, and d) gain (i.e. positive growth spurred by the caregiving experience). These factors pose a complex challenge for familial caregivers who are required to navigate multiple roles amidst changing familial relationships.

Like other aspects of caregiving, ethnic differences influence the experience of role strain among family members adopting the caregiving role. White caregivers reported more role strain
than Black caregivers in a sample of daughters caring for parents (Mui, 1992). Among Black caregivers in Mui’s sample, lack of respite and poor self-reported health predicted greater role strain; among White caregivers, poor relationship quality with care recipient and work conflict predicted increased role strain. Lower caregiving role demand alleviated role strain for Black caregivers, but not for White caregivers (Mui, 1992).

Role Importance

What differentiates those who suffer negative consequences versus those who also experience positive effects of caregiving? As discussed throughout this review, caregiver and care recipient demographic and personality characteristics, care recipient needs, quality of family support and relationships and the greater social context all contribute to caregiving outcomes. The proposed study suggests that one personal contextual factor, the perceived importance of the caregiver’s prior familial role (e.g., spouse, son, or granddaughter), influences how the caregiving experience is appraised and ultimately influences caregiver mental health. This study further suggests that the quality of emotional relationship between caregiver and care recipient can either exacerbate or buffer caregiver stress during this shifting in the prior familial role (e.g., spouse, son, or daughter) to include the self-identified role of caregiver. Indeed, the significant familial challenge posed by role changes during the transition to caregiving has been recognized by other researchers (Plank at al., 2012).

Caregiver identity theory posits that the role of caregiver is adopted into one’s identity in stages, and, as care activities increase over time, replaces the caregiver’s previously ascribed to familial role (Montgomery, et al., 2007). According to the model, caregivers move from identification with a familial role such as spouse or son, to caregiver and then back to identification with the initial familial role when the care recipient transitions into another care
environment such as a skilled nursing facility, and these transitions in role identity vary from caregiver to caregiver. As the care recipient becomes more dependent on the familial caregiver, the relationship shifts, and therefore a shift in the caregiver’s identity occurs (Montgomery et al., 2007). Five phases of caregiving include role onset, self-identification as caregiver, competing familial and caregiving roles, contemplation of placing care recipient in skilled nursing care and discarding the caregiver identity as caregivers return to initial familial roles and care recipient transitions into another care environment. Standards or expectations for behavior that individuals use to guide their actions as a result of their view of themselves are referred to as identity standards. Throughout the phases of caregiving, individuals vary in their conceptions of what is appropriate behavior according to the roles they see themselves fulfilling and how important those roles are to them (Noor, 2004).

Caregiver identity theory suggests that distress results when caregivers find themselves performing activities that are not consistent with such self-ascribed views about the roles they perform (Montgomery et al., 2007). For example, a daughter integrates helping her father with IADLs such as cooking and laundry into her conception of the role of daughter, but when faced with the necessity of assisting her father with ADLs such as bathing and toileting the daughter is forced to shift her self-view to include the role of caregiver which increasingly competes with the previous role of daughter. According to caregiver identity theory, at such transitions caregivers experience maximal distress, because the tasks they perform are inconsistent with their identity standards (Montgomery et al., 2007). Increased time spent providing caregiving tasks leads to increased identification as caregiver in lieu of prior familial role identities (Montgomery et al., 2007).

Role importance, or role salience, provides caregivers with purpose, meaning and self-
worth as a result of providing familial care and may offset negative effects of caregiving (Noor, 2004). Martire, Stephens and Townsend (2000) proposed that caregivers experience greater meaning and behavioral regulation while enacting a role that is more central to their identity and these factors contribute to lowered caregiving distress. Direct effects of caregiver role importance on psychological well-being have been reported, but not consistently (Martire et al., 2000; Thoits, 1995). In fact, greater parent care role centrality was positively related to perception of role rewards, which Martire et al. (2000) suggested can contribute to life satisfaction among caregivers for parents. However, parent care role centrality did not change the relationship between parent care stress and caregiver well-being (Martire et al., 2000).

Noor (2004) suggested a moderating influence of role importance on the relationship between role strain and well-being, whereby role salience exacerbates negative effects of stress due to the increased threat associated with strain experienced in roles perceived as more important. Mixed findings show role importance both exacerbating and buffering negative effects of familial stress on psychological stress outcomes (Noor, 2004). In family relationships where there is reciprocity and effective communication, the benefits of caregiving may be enhanced and positively influence caregiver outcomes (Sebern, 2005). It appears that both role importance and appraised quality of relationships among caregivers, care recipients, and other family members impact the experience of familial caregivers. Thus, the importance of considering the family context of caregiving is evident. Therefore, the proposed study examines participants’ ratings of role importance for their original family positions vis-a-vis the care recipient (e.g., daughter, spouse, grandson), as it potentially becomes eclipsed by the role of caregiver over time, and whether affectional solidarity moderates the relationship between familial role importance and depression.
The process of evaluating one’s familial and caregiving roles and the acceptability of these roles can be considered a process of role appraisal. Caregiving appraisal is defined as the caregivers’ perceptions about the caregiving situation and resources available, and can encompass appraisal of multiple facets of caregiving such as care recipient needs, caregiving self-efficacy and caregiver burden (Haley, Levine, Brown, & Bartolucci, 1987; Saad et al., 1995). Lawton, Kleban, Moss, Rovine, and Glicksman (1989) noted that appraisals of caregiving can be positive as well as neutral or negative. Appraisal of the caregiving role plays an important role in differential outcomes among familial caregivers and interacts with other caregiver characteristics, such as the capacity for empathy and demographic factors (Haley et al., 1987; Lee et al., 2001; Saad et al., 1995). Clyburn et al. (2000) found that appraisal of caregiving mediated the relationship between caregiving and mental health.

Appraisal of care recipients’ disability and behavioral problems as highly stressful was related to increased depression among dementia caregivers (Haley et al., 1987). In addition, caregivers’ appraisal of the caregiving role predicted variations in life satisfaction, depression and reported physical health (Lee et al., 2001). Lyons, Zarit, Sayer and Whitlatch (2002) found relationship strain between caregivers and care recipients was positively correlated with poor health and depression among caregivers. They suggested caregiver appraisals are associated with relationship quality between caregivers and care-recipients, such that when conflict is present in the relationship more stress is experienced regardless of care-recipient impairment or care needs. Agreement between caregiver and care recipient appraisal of caregiving stress predicts relationship strain, and therefore Lyons et al. (2002) propose that relationship quality colors appraisals of the caregiving role. In line with this view, the proposed study examines the
influence of perceived affectional solidarity (i.e., the emotional facet of relationship quality) between caregiver and care recipient on caregiver mental health. The familial role in relation to the care recipient, not the role of caregiver, is the focus of this study. Martire et al. (2000) cite findings that suggest caregiver role importance can improve caregiver outcomes; therefore, greater reported importance of the familial role is expected to inversely impact caregiver outcomes as caregivers adopt greater caregiving responsibilities (Montgomery, et al., 2007; Noor, 2004).

Self-efficacy

Self-efficacy, or beliefs about one’s ability to perform a specific behavior or task, has received increased attention in the recent literature. Self-efficacy for caregiving tasks influences reported mental and physical health of dementia caregivers (Gallagher et al., 2011; Zeiss, Gallagher-Thompson, Lovett, Rose, & McKibbin, 1999). For example, Montoro-Rodriguez and Gallagher-Thompson (2009) found less subjective burden was reported by dementia caregivers who endorsed greater self-efficacy for managing upsetting thoughts. Gallagher and colleagues (2011) found that lower self-efficacy for symptom management predicted greater caregiver burden and depression. Likewise, caregiver appraisal of limited self-efficacy to manage care recipient’s disability and behavioral problems was related to increased depression (Haley et al., 1987). In contrast, high caregiving self-efficacy appears to reduce risk of future behavioral health risk factors among female caregivers (Rabinowitz, Saenz, Thompson & Gallagher-Thompson, 2011).

The relationship between caregiver characteristics and experiences is not always simple or straightforward. Self-efficacy interacts with and mediates the relationship between stress and psychosocial well-being outcomes among dementia caregivers (Montoro-Rodriguez &
Gallagher-Thompson, 2009). Among caregivers for older adults with functional impairments, self-efficacy mediated the relationship between caregiver personality and caregiver mental health (Löckenhoff et al., 2011). Also, self-efficacy mediated the relationship between care recipient neuropsychiatric symptoms and both caregiver burden and depression among a sample of dementia caregivers (Gallagher et al., 2011).

Romero-Moreno et al. (2011) examined the role of self-efficacy in light of the stress and coping model, proposing that the influence self-efficacy exerts on the relationship between caregiving stressors and outcomes is indirect and is expressed through the interaction with individual elements within the stress process. In a study of female dementia caregivers, Rabinowitz et al. (2011) found that depression mediated the relationship between caregiver self-efficacy and cumulative health risk. Caregiver self-efficacy for controlling upsetting thoughts moderated the relationship between high levels of caregiver burden and psychological factors, with higher self-efficacy associated with lower levels of anxiety and depression (Rabinowitz et al., 2011). Also, sociocultural factors play a role in how self-efficacy influences caregiver experiences. Self-efficacy is a more strongly endorsed cultural value among Latino caregivers when compared to non-Latino white caregivers, and self-efficacy is related to specific task performance for Latino caregivers (Montoro-Rodriguez & Gallagher-Thompson, 2009).

Caregiving Resources

Social Support

Social support networks may include family and friends as well as social activities, such as participation in religious and community organizations. Pearlin et al. (1990) distinguish between the existence of networks and the actual receipt of social support. While networks
consist of individuals capable of support provision, social support refers to the active provision of support (Pearlin et al., 1990). Receipt of social support is associated with caregiver outcomes such as decreased depression and increased self-reported physical health (Haley et al., 1987). Conversely, limited social support is tied to greater appraisals of burden among a sample of family caregivers for Alzheimer’s patients (Harwood et al., 2000). Therefore, social support can be viewed as a buffer in the relationship between role conflict experienced by caregivers and depression.

Families can be a vital source of social support for caregivers. In fact, care recipients themselves, depending on the variables related to the condition necessitating care, often provide social support for family members who provide them care (Lowenstein & Daatland, 2006; Sebern, 2005). And family strengths such as pre-existing family dynamics and social support exchange impact outcomes for all members of the caregiving family system, including the ill or disabled care recipient (Rolland, 2003). For this reason it is important to consider how the relationship between caregiver and care recipient, in addition to the family as a whole, are impacted as a result of caregiving.

Normative interactions between illness or disability, care recipient and the family system are described by Rolland (2003) who emphasized the importance of psychosocial factors to the experience of caregiving for an ill or disabled relative. As patients and family members cope with chronic illness, the quality of familial relationships impacts the ability of patients and their family members to regulate emotions and cope with stressors evoked by the disease process (Rolland, 2003; Weihs, Fisher, & Baird, 2002). A consistent and gratifying emotional environment fosters relationships characterized by validation, secure attachments, and mutuality which, in turn, increase physiological regulation in both patients and caregivers. In contrast,
conflict among family members can interfere with effective emotional regulation (Fiscella, Franks, & Shields, 1997; Levenson, Carstensen, & Gottman, 1994). In addition, stable and mutual family relationships enable patients and caregivers to share the burdens associated with disease-management, thereby reducing both patient and caregiver burden (Rolland, 2003; Weihs et al., 2002).

The quality of the current relationship between older family members and caregivers, as well as the context of past relational patterns, play a role in determining the kind of care provided, by whom, and for how long (Connidis, 2010). Relationship closeness is linked to daily time invested in caregiving, the type of caregiving provided, and the length of time family members are willing to continue care provision in lieu of institutionalization of family members in need of care (Montgomery et al., 2007; Schwartz, 2006; Silverstein et al., 1995).

Intergenerational family relationships among families with older adults can be thought of as an accumulated pattern created by a lifetime of material, behavioral and emotional exchange between and among members (Silverstein et al., 1995). Historical family relational dynamics have been shown to influence current family affectional ties and intergenerational contact across 20 years or more (Parrott & Bengtson, 1999). Early family events, such as divorce, harsh parenting, or perceived parental rejection detrimentally affect closeness and interpersonal exchange within families later in life. On the other hand, early family cohesion, closeness and parental affection have been shown to positively influence later family relationships (Parrott & Bengtson, 1999).

**Familial Solidarity**

Bengtson and Roberts (1991) proposed a construct called intergenerational family solidarity, which describes patterns of intergenerational cohesion throughout the family life...
course after children reach adulthood and create their own families. Intergenerational solidarity includes six distinct facets of parent to adult-child interaction: opportunity for contact, family structure, strength of familism norms, association, resource-sharing and affection. In short, intergenerational solidarity consists of emotional and behavioral facets of support, interaction, cohesion and sentiment between generations in families. Affectional solidarity, the aspect of intergenerational solidarity that is the focus of this study, is defined as expressed positive appraisal, sentiments, and perceived reciprocity of feeling regarding relationships with family members (Bengston, 2001). Indicators of affectional solidarity include understanding, warmth, affection, trust, respect and closeness as well as perceived reciprocity of such positive sentiments (Bengston & Roberts, 1991).

Silverstein et al. (1995) identified affectional solidarity or emotional attachment to parents as a key determinant in whether support is offered to aging parents. Emotional closeness enhances the support children provide to older family members, as caregiving is more extensive from sons and daughters when relationship is closer (Bengston et al., 2000; Connidis, 2010). Schwartz (2006) found that daughters have increased engagement in help exchanges with mothers when they report a more intimate relationship. Not surprisingly, research supports the reciprocity norm hypothesis that individuals who received parental support in young adulthood show increased care provision for parents as they age (Antonucci, 2001; Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2001). In addition, research shows that demands of caregiving for a dependent family member are tempered by a loving relationship with the care-recipient (Huang & Peng, 2010).

As is the case for many facets of the caregiving experience, patterns of affectional solidarity also vary by gender, family structure and ethnicity. Silverstein et al. (1995) found that
daughter’s affection for parents directly motivated caregiving behaviors, whereas son’s affection influenced caregiving behaviors indirectly through social contact. Thus, it appears that sons require more frequent interaction with parents prior to provision of care and, if they possess affection for parents, require greater familiarity with parents to motivate caregiving. Whereas daughters are influenced by feelings of intimacy, sons are motivated by feelings of familiarity which interact with affectional solidarity to motivate provision of support to older parents (Silverstein et al., 1995).

Findings from the intergenerational linkages survey conducted in 1989 indicated that over 70% of adult children reported feeling very close to mother and over 50% reported feeling very close to fathers (Lawton, Silverstein, & Bengtson, 1994). Fathers who were no longer married had adult children who reported less closeness than fathers who remained married. In this same study, a greater percentage of African Americans reported a close relationship with mothers (88% compared to 70% overall). Katz, Gur-Yaish and Lowenstein (2010) found affectional solidarity (i.e., the emotions, thoughts and behaviors regarding warmth and closeness felt within familial relationships) was most strongly associated to amount of help provided in Israel, while need for help influenced care provided in both Norway and Israel. In Spain, regardless of parental need for care, high levels of help were provided by adult child caregivers (Katz et al., 2010).

As relationship quality with care recipient is an influential factor in the caregiving experience, affectional solidarity’s role in the caregiving process will be examined in this study. Specifically, caregiver perceptions of affectional solidarity with care recipient will be examined as a moderating facet of social support in the relationship between familial role importance and depression.
Caregiving burden describes appraised caregiving stress (Gooen, 2000). Zarit, Todd, and Zarit (1986) defined caregiving burden as the extent of perceived suffering in social, physical, emotional and financial domains as the result of caregiving. Lower levels of caregiving burden are associated with higher self-rated physical health (Montoro-Rodriguez & Gallagher-Thompson, 2009). Caregiving burden among those providing care to a relative with dementia is associated with decision to place the care recipient in a nursing home (Zarit at al., 1986).

An exploration of the factors that impact the experience of burden among familial caregivers indicates that the individual characteristics of caregivers, care recipients and their relationships remain influential. In a sample of primary care providers for an elderly relative, Montgomery, Gonyea, and Hooyman (1985) distinguished between objective burden (i.e., caregiving activities and events that result changes in caregivers’ daily life) and subjective burden (i.e., emotional reactions and attitudes that result from caregiving). Caregivers who were younger and had higher incomes reported greater experience of subjective burden, whereas caregivers who provide assistance with nursing care and activities of daily living, such as bathing and dressing, as well as aid with mobility, transportation and errands report greater objective burden (Montgomery et al., 1985). These latter correlates are time-intensive and therefore contribute to greater reported burden. Likewise, a greater amount of care recipient behavioral problems was associated with increased caregiver burden among dementia caregivers (Montoro-Rodriguez & Gallagher-Thompson, 2009).

Caregiving burden is impacted by current and historical quality of relationship between care recipient and caregiver. Relationship quality between caregivers and their familial care recipients was negatively correlated to the amount of burden experienced by familial caregivers.
(Yeh & Bull, 2012). Despite multiple care needs, reports of stronger attachment to care recipient were related to lower subjective burden among daughters providing care for a parent (Cicirelli, 1993). Clearly, the interactions between caregiver and care recipient characteristics and burden are complex, and not all outcomes influenced by subjective caregiver burden are detrimental to caregiver and family well-being (Zarit at al., 1986). In fact, Monahan, Greene, and Coleman (1992) found that caregivers who reported higher amounts of caregiving burden were more likely to have greater attendance at interventions designed to assist caregivers.

The socio-cultural model of stress and coping suggests that ethnic differences found in caregiving stress and burden are due to differential interpretation and coping strategies (Montoro-Rodriguez & Gallagher-Thompson, 2009). Consistent with the socio-cultural model of stress and coping, Pinquart and Sörensen (2006) suggested that the way in which individuals respond to and cope with stress varies by gender, which in turn results in gender differences among caregiver outcomes. Harwood et al. (2000) found that female gender was associated with appraisal of increased caregiver burden among a sample of family caregivers for Alzheimer’s patients. Women caregivers also tend to experience lower levels of well-being and physical health, as well as greater levels of caregiver burden and depression than men providing care (Pinquart & Sörensen, 2006).

Health consequences of caregiving are well documented. For example, reduced immune function and increased blood pressure have been found among caregivers (Kiecolt-Glaser, Glaser, Gravenstein, Malarkey & Sheridan, 1996; Vitaliano et al., 2005). Studies show higher levels of depression and anxiety as well as increased use of psychotropic medications among caregivers (Schulz et al., 1997; Sleath, Thorpe, Landerman, Doyle & Clipp, 2005). This may be because the demands of caregiving lead to limitations in daily activities for caregivers, which can
contribute to caregiver psychological distress because time that otherwise would have been spent on other life activities such as socialization, filling other relational roles (e.g., friend, spouse, or parent), and personal care is allocated to caregiving tasks (Alspaugh et al., 1999; Montgomery et al., 2007; Yee & Schulz, 2000). However, not all changes spurred by familial caregiving are negative (Cranswick, 2003; Harris, 1998; Sheehan & Donorfio, 1999).

**Differential Impact of Caregiving**

Despite strong evidence that the caregiving role takes its toll, there are mixed findings regarding the negative impact of caregiving on caregivers for older family members. For example, Killian, Turner and Cain (2005) found no relationship between caregiving and physical health in a sample of midlife women caring for one or more older family members, despite a significant correlation between caregiving and depression in the sample. Additionally, Loomis and Booth (1995) found no differences in well-being, marital quality, satisfaction with leisure time and financial resources between children who provide care for a parent or parent-in-law and those who do not.

Not all consequences of caring for an aging family member are detrimental to caregivers. Lawton et al. (1989) reported that many caregivers experience affirmation or satisfaction as the result of daily caregiving tasks. For example, caregivers can develop a sense of competence in their ability to provide care and benefit from recognition received from others for the care provided (Gatz et al., 1990). Cranswick (2003) reported that the majority of informal caregivers view caregiving as an opportunity to build the relationship with an older family member and also repay some of the care that was provided to them. Sheehan and Donorfio (1999) found that daughters who provided care for elderly mothers reported increased tolerance and acceptance, reduced conflict, and increased time to build the relationship as the result of providing care. In
another study, sons reported a sense of purpose, personal growth, and the opportunity to serve as role models for their own children as the result of providing care to parents (Harris, 1998). These mixed findings may be explained by gains due to familial role centrality and/or buffering effects of relationship quality between caregiver and care recipient (Gatz et al., 1990; Martire et al., 2000).

Research suggests affectional solidarity may lessen the impact of caregiving demands for family caregivers (Huang & Peng, 2010, Sebern, 2005). Likewise, role importance has the potential to limit negative effects of caregiving among individuals who find their familial role central to their identity; however, greater role centrality in the context of stress may increase negative effects of caregiving (Martire et al., 2000; Noor, 2004). Therefore, role importance and affectional solidarity may be influential variables that help explain inconsistent outcomes among familial caregivers cited in the literature (Killian et al., 2005; Loomis & Booth, 1995).

The Current Study

The purpose of this study was to examine direct and indirect links between role importance, affectional solidarity, and caregiver depression reported by adult caregivers of familial care recipients over time. The potential evolution of caregiver’s role identities throughout the caregiving process and associated role strain can impact the experience of caregiving. Therefore, a measure of role importance (i.e., the amount of emphasis the caregiver places on his or her familial role with respect to the care-recipient and appraisal of how well the role is performed) was included as a predictor of depression over time. Because relationship quality between caregiver and care recipient can impact the experience of caregiving (Rolland, 2003; Weihs, Fisher, & Baird, 2002), caregiver reported affectional solidarity with care recipient was included as a potential moderator between role importance and caregiver depression.
With the dearth of research regarding parent-child ties in late life, there is a clear need for the development of theoretically driven models of parent-child support and relationship quality and the implications of such factors on adults in later life (Fingerman & Birditt, 2011). Existing research has shown that subjective appraisal of the caregiving role influences caregiver outcomes (Lee et al., 2001) and role importance within the context of familial role adjustments colors the experience of caregiving (Plank, Mazzoni & Cavada, 2012). Therefore it is worthwhile to prospectively investigate links between role importance and mental health of adult familial caregivers over time. Additionally, retrospective accounts of familial relationships predict likelihood and quality of care provision (Parrot & Bengston, 2001). Thus, further examination of caregiver care-recipient affectional solidarity as a moderator in the association between caregiver familial role importance and caregiver depressive symptoms is warranted.

The current study utilized a subset of data from the University Of Southern California Longitudinal Study Of Generations (Bengston, 1971-2000) and incorporated identity theory to test a longitudinal model predicting caregiver depression. Hofer and Sliwinski (2006) identified benefits of longitudinal research designs within aging populations, including the ability to distinguish changes as a result of stable individual factors from those due to aging, measurement of both intraindividual and interindividual change, and the development of theory-driven models of within-person change. In addition, longitudinal analyses take a developmental perspective across the life-span and allow for selection processes and mortality effects to be accounted for (Hofer & Sliwinski, 2006).

Research Questions and Hypotheses

Based on the systemic, developmental perspective of intergenerational affectional solidarity, with an understanding of identity theory, and the previous findings on the subjective
nature of caregiving, it was hypothesized that initial caregiver reports of affectional solidarity will influence the way in which caregiver reports of familial role importance predict caregiver depression three years later. Clarity regarding the role of caregiver perceptions of affectional solidarity and role importance within the caregiving process is needed. Therefore, this study tested the following hypotheses:

1. Perceived role importance for familial role in relation to care recipient (e.g., daughter, grandson) will influence caregiver appraisal of adoption of caregiver role. High role importance for familial role will increase distress as caregiving role is adopted resulting in increased depression. Caregiver reports of role importance in 1991 will be positively associated with caregiver depression in 1994.

2. Affectional solidarity can interact with objective and subjective caregiving factors, such as role importance, and therefore can change how caregiving is experienced by caregivers. Affectional solidarity is expected to moderate the relationship between role importance and depression. Specifically, low affectional solidarity will increase depression in caregivers who endorse a high amount of role importance. High affectional solidarity will decrease depression in caregivers for whom the familial role is perceived as important.

Influential caregiver characteristics such as age, gender, education level, occupational status, income, and relationship to care recipient were controlled for in above analyses. Caregiver depression at Time 1 was also controlled for in above analyses.
CHAPTER 2

METHOD

Sample

The current study used archival data from the University of California Longitudinal Study of Generations 1971, 1985, 1988, 1991, 1994, 1997, 2000 project led by Vern L. Bengtson, Principal Investigator. The complete dataset included 300 three-generation families from California that were followed across 29 years and 7 waves of data collection. At the time of the first wave in 1971, each family consisted of grandparents aged 60-69, parents aged 40-49, and children in their mid to late teens through their mid-20s. The study used a subset of the larger dataset consisting of wave 4 (1991) participants (n = 57) aged 16 to 49 years (M = 28.47) who identified themselves as caregivers. The majority of caregivers (n = 25) were from generation 3 (i.e., children) aged 16 to 27 years (M = 18.44), followed by generation 2 (i.e., parents, n = 18) aged 36 to 49 years (M = 42.39), and there were also some participants who did not report which generation they were from (n = 15). Males (53.5%) made up a greater portion of the sample than females (46.5%). Marital status of the sample was 46.5% married (n = 20), 46.5% single (n = 20), 4.7% engaged to be married (n = 2), and 3.3% divorced or separated (n = 1). Caregivers employed full-time (n = 23) constituted 40.4% of the sample, while 14.0% of the sample worked part-time (n = 8), 22.8% were homemakers, retired, or not employed for pay (n = 13), 8.0% were unemployed or looking for work (n = 5), 1.8% were working both full-time and part-time jobs (n = 1), and 12.3% of the sample did not report current employment status (n = 7). The dataset had little variation in race and ethnicity, with the sample made up of almost exclusively white, working and middle-class families.
Measures

Role importance was assessed by two questions that ask participants to rate both how important the role of son/daughter or grandchild is to his or her sense of self, as well as the participant’s self-assessed performance in the role of child or grandchild. A 7-point Likert scale ranging from *Not at all important* to *Extremely important* measures role importance. Self-reported quality of role performance was measured by a 4-point Likert scale that ranges from *poor* to *very good*. Role importance measures used in analysis were specific to the parent or grandparent for whom the participant provided care. The Chronbach’s alpha reliability coefficient for the Role importance items in this sample was .89.

Affectional solidarity was measured by 6 questions answered by caregivers regarding their relationship with their parents. Specifically, a 6-point Likert scale assessed caregiver views of communication, affection, closeness, and understanding within the relationship. Response choices ranged from *not at all* to *extremely*. Examples of questions assessing affectional solidarity included “Taking everything into consideration, HOW CLOSE do you feel is the relationship between you and your parent at this point in your life?,” “How is COMMUNICATION between you and your parent—exchanging ideas or talking about things that really concern you at this point in your life?,” and “Overall, how well do you GET ALONG WITH your parent at this point in your life?” The Cronbach’s alpha reliability coefficient for the Affectional solidarity items in this sample was .84 for fathers, .91 for mothers, .96 for grandmothers, and .96 for grandfathers. Internal consistency for measures of affection between mothers and fathers and their adult children in prior studies is strong (.93 for mothers; .91 for fathers; Silverstein, Conroy, Wong, Giarrusso & Bengtson, 2002).

Caregiver depression is measured with the Center for Epidemiologiccal Studies
Depression (CES-D; Radloff, 1977) inventory. The CES-D inventory is a 20-item self-report instrument that assessed the frequency of depressive symptoms experienced in the past week by a 4-point Likert scale that ranged from Rarely or none of the time to Most or all of the time. The CES-D inventory includes items such as “I felt that everything I did was an effort,” “I did not feel like eating; my appetite was poor,” and “I thought my life had been a failure.” The Chronbach’s alpha reliability coefficient for the CES-D items in this sample was .93. Previous research using the CES-D scale indicated high test-retest reliability, internal consistency, and validity for this measure (e.g., Hertzog, VanAlstine, Usala, Hultsch, & Dixon, 1990; Radloff, 1977).

Procedure

Families were selected randomly from a pool of 840,000 of enlisted enrollees in a health maintenance organization in Los Angeles, California. Recruitment consisted of mailing questionnaires to more than 3,000 older subscribers. One grandfather assented to participation in each three-generation family from the sample. Data was collected via self-report questionnaires that were mailed to participants. For more extensive information regarding the Longitudinal Study of Generations dataset, see Parrot and Bengtson (2001). Data of interest in the proposed study were collected during Waves 4 and 5 in 1991 and 1994, respectively.
CHAPTER 3

RESULTS

Data Analysis

Data collected on each measure of interest were inspected for missing items and dealt with according to current research standards (Schlomer, Bauman & Card, 2010). Correlations with dummy-coded missing values were run to examine whether patterns of missing data emerged based on demographic variables, independent variables, or the moderator variable. No relationships were found between missing values for role importance, affectional solidarity, and T1 depression. There was a significant relationship, $r(55) = .42 \ (p = .008)$, between ethnicity and missing values for T1 depression. Due to the relationship between missing T1 depression values and this demographic variable, data were identified as missing at random (MAR; Schlomer, Bauman & Card, 2010) and not missing completely at random (MCAR). No other significant correlations were observed between demographic variables and missing values on control, predictor, or moderator variables. In order to maintain sample size and minimize bias in a dataset judged to have data MAR, multiple imputation procedures were applied to estimate missing data on these variables.

Continuous predictor variables were centered on the grand sample mean (Frazier, Tix & Barron, 2004). Assumptions corresponding to hierarchical regression procedures were assessed with appropriate statistical analyses and graphical exploration. No outliers were identified, and no skewness or kurtosis was observed. Mild heteroscedasticity was observed upon visual inspection of scatter plots representing correlations between variables of interest, therefore inverse transformation (e.g., $1/(X+C)$) was performed on affectional solidarity values in order to meet the assumption of normality for regression analysis.
Correlations between demographic, control, predictor, moderator, and dependent variables were examined. Significant relationships were observed between several demographic variables and are shown in Table 1. A significant negative relationship, \( r(50) = -0.30 \ (p = .032) \), was observed between employment status and T2 depression. Therefore, employment status was controlled for in regression analyses. T1 depression showed a significant positive relationship \( r(50) = 0.54 \ (p < .01) \) with T2 depression. A significant negative relationship \( r(50) = -0.47 \ (p < .01) \) between T1 depression and role importance was also observed. In addition, a significant negative relationship, \( r(50) = -0.29 \ (p = .039) \), between affectional solidarity and T2 depression was observed.

**Hypothesis 1: Role Importance and Depression**

The main effect hypothesis, shown in Table 2, that role importance at Time 1 (T1; Wave 4, 1991) will predict caregiver depression at Time 2 (T2; Wave 5, 1994) was examined by using a linear regression procedure in SPSS. Depression at T1 and caregiver employment status were entered in Step 1 as control variables. In Step 2, familial role importance was entered as the predictor. Depression at T2 was the dependent variable in this analysis. As expected, T1 depression significantly predicted T2 depression among familial caregivers. Step 1 of the model was significant and predicted 28.2% of the variance in depression at T2. Contrary to hypotheses, when role importance was entered in Step 2 of the analysis, the model did not increase in predictive power for depression at T2.

**Hypothesis 2: Affectional Solidarity Moderation**

The moderation hypothesis, shown in Table 3, included affectional solidarity as a moderator in the relationship between role importance and caregiver depression over time was tested utilizing a hierarchical linear regression procedure in SPSS. Step 1 included T1 depression
and caregiver employment status as control variables. In Step 2, role importance was entered as the predictor. Step 3 added the moderator, affectional solidarity. In Step 4, the interaction term role importance by affectional solidarity was entered. Depression at T2 was the dependent variable in this analysis. As in the main effect model, T1 depression but not role importance predicted depression at T2 among caregivers. When entered into the model at Step 3, affectional solidarity approached significance in the predicted direction, $b = -9.20$, $t(51) = -1.85$, $p < .075$, but was not significantly related to depression T2. The inclusion of the interaction term including role importance by affectional solidarity at Step 4 did not increase the predictive power of the model.

**Post-Hoc Analyses**

Due to the non-significance of the proposed model, and health’s impact on depression among caregivers (Cucciare, Gray, Azar, Jimenez, & Gallagher-Thompson, 2010), caregiver health was considered as a potential contributor to depression over time. Self-reported health was significantly correlated with depression at both T1, $r(52) = .37$ ($p = .01$), and T2, $r(53) = .31$ ($p = .03$). Due to the significant correlation between health and depression, health was also entered into the model as a control variable. With caregiver health, employment status, and T1 depression as controls, the regression model at step 1 accounted for 23.5% of the variance in depression at T2 and did not improve model fit over step 1 of the previously tested model that controlled for employment status and T1 depression.

To examine the potential for health as an additional influence on depression, shown in Table 4, health was added to the previously tested main effect regressions as a control variable in Step 1 along with employment status and T1 depression. In Step 1, caregiver health, employment status, and T1 depression were entered as control variables. In Step 2, familial role importance
was entered as the predictor. Depression at T2 was the dependent variable in this analysis. As in above analyses, T1 depression significantly predicted T2 depression among familial caregivers. Health was non-significant in the model. Again, role importance was not significant at Step 2.

To examine the potential for health as an additional influence on depression in the moderation model, shown in Table 5, caregiver health, employment status, and T1 depression were entered as Step 1 as control variables. The second step included role importance as the predictor. In Step 3, affectional solidarity, the moderator, was entered. The interaction between role importance and affectional solidarity was entered in Step 4. T2 depression remained the dependent variable in this analysis. Controlling for caregiver health produced different results in the moderation regression when compared to the originally proposed model. T1 depression significantly predicted T2 depression among familial caregivers as it did in proposed analyses. Again, health was non-significant in the model. Role importance remained insignificant at Step 2. At Step 3, however, in this model with health added as a control variable, affectional solidarity showed a significant negative relationship with T2 depression, $b = -11.25$, $t(51) = -2.13$, $p < .05$.

As in the proposed moderation analysis, the interaction of role importance and affectional solidarity was not significant.

Partial correlations were computed to examine associations between control, predictor, moderator, and outcome variables. When partial correlations were examined controlling for T1 depression, neither role importance nor affectional solidarity showed a relationship with T2 depression. Upon examination of partial correlations controlling for both caregiver health and T1 depression, role importance was significantly related to T2 depression, $r(48) = .743$ ($p = 0.049$). Affectional solidarity approached a significant relationship with T2 depression $r(48) = -.261$ ($p = 0.067$), suggesting a negative relationship between affectional solidarity and depression.
In addition, data were divided into 3 groups: high (upper third, \( n = 18 \)), mid-range (\( n = 24 \)), and low (lower third, \( n = 15 \)) T1 depression. High depression and low depression groups were examined separately to explore the above roles of role importance and affectional solidarity in predicting T2 depression. Individuals in the middle range for depression at T1 were not analysed in post-hoc analyses. Among caregivers with low levels of T1 depression, affectional solidarity approached significance, \( b = -3.003, t(17) = -1.883, p = .08 \), accounting for 12.4% of the variance in T2 depression. Again, a negative relationship is indicated between affectional solidarity and depression, specifically among caregivers with low depression at T1 in this sample. Role importance did not predict T2 depression among those in the low T1 depression group. No significant relationships were found between role importance or affectional solidarity and depression among caregivers in the high T1 depression group.
CHAPTER 4
DISCUSSION

The purpose of this study was to explore two research questions, 1) whether caregiver reported role importance at T1 is positively associated with caregiver depression at T2, and 2) whether affectional solidarity moderates the relationship between role importance and depression. Key findings will be discussed along with implications for practitioners and future research.

Consistent with previous research, T1 depression significantly predicted depression at T2 in the current sample (Lambert, 2012; Montgomery et al., 2007). In addition, there was a significant negative correlation between T1 depression and self-reported familial role importance. This may point to suppressed report of role importance and negative response bias regarding caregivers’ own familial role performance among participants with greater levels of T1 depressive symptoms. Symptoms of depression include loss of interest, loss of feeling for important others, feelings of worthlessness, and pessimism (American Psychiatric Association, 2000). This could have contributed to the non-significant findings discussed below.

Hypotheses relied on the premise that role strain between familial identity as child or grandchild and identity as a caregiver contributes to the development of depression in caregivers. Contrary to predictions, however, analyses testing the first research question suggested that familial role importance is not associated with caregiver depression over time. The measure of role importance alone may not adequately reflect the process of caregiver strain and appraisal. Specifically, I measured the importance caregivers place on their familial role such as son or granddaughter but, it is possible that a factor of equal or greater significance in this process is the importance familial caregivers place on their role as a caregiver. In that this may not adequately
explain the relationship between caregiver role strain, appraisal, and subsequent depressive symptoms, it may be that a factor of equal or greater significance in this process is the importance familial caregivers place on their role as a caregiver (Martire et al., 2000; Montgomery, et al., 2007; Noor, 2004).

Although previous research points to the importance of familial role adjustments and caregiver appraisals while caregiving (Lee et al., 2001; Plank, Mazzoni & Cavada, 2012), additional factors beyond role importance may have a greater impact on caregiver depression. Such influential factors include caregiver health, social support, and the quality of relationship between caregiver and care-recipient (Haley et al., 1987; Harwood et al., 2000; Lambert, 2012; Lowenstein & Daatland, 2006; Montgomery et al., 2007; Rolland, 2003; Sebern, 2005). Importantly, social support was not included in the current analyses which may account for reduced caregiver depression in this sample (Rolland, 2003; Weihs et al., 2002).

Furthermore, research suggests that phase of caregiver role identity influences caregiver perceptions of acceptable role behaviors, as well as caregiver mental health and well-being outcomes (Martire et al., 2000; Montgomery et al., 2007, Noor, 2004). Caregivers in the current sample may have accepted the caregiving role, which can increase positive experiences of meaning during caregiver performance of behaviors congruent with this identification as a caregiver and thus may mitigate caregiving distress (Martire et al., 2000). Alternatively, given that different age cohorts made up the sample, perhaps participants represent several stages of caregiver role identity development, which may have muddled findings because some participants might identify as caregivers while others have yet to adopt or have since discarded the caregiving identity.
As social support can influence the development, or lack of development, of depressive symptoms (Fiscella, Franks, & Shields, 1997; Levenson, Carstensen, & Gottman, 1994), the finding that affectional solidarity was significantly related to caregiver T2 depression suggests that affectional solidarity may tap into the socioemotional support caregivers experience in their relationship with care-recipients. Caregiver’s reported emotional relationship quality with care-recipients was negatively related to depression over time, which is consistent with the model of caregiver stress proposed by Gatz et al. (1990) when affectional solidarity with care-recipient is included as a social support resource.

Analyses testing the second research question did not support the moderation hypothesis, which predicted that affectional solidarity would moderate a relationship between role importance and depression. However, among caregivers with low depression at T1, greater affectional solidarity with the care recipient approached statistical significance ($p < 0.08$), and partial correlation analyses suggest a negative relationship between affectional solidarity and depression. This pattern of findings supports the hypothesis that affectional solidarity might act as a protective factor for caregivers and reduce the risk for depression over time.

In light of unsupported hypotheses discussed above, post-hoc analyses were conducted to examine the influence of self-reported caregiver health on depression in the current sample. Health was considered as a potential predictor of caregiver depression over time based on previous research suggesting that a caregiver’s physical health perceptions are associated with depression (Valente et al., 2011). Analyses supported the expectation of a relationship between health and depression, with caregiver health self-reports significantly related to depression at both T1 and T2. Although health was correlated with depression, the inclusion of health did not improve upon the prediction of T2 depression. However, when caregiver health, employment
status, and T1 depression were controlled for, analyses showed a significant negative relationship between affectional solidarity and T2 depression. This suggests that affectional solidarity is an important consideration when examining caregiver depression, and that a strong emotional relationship with the care-recipient may limit the experience of depressive symptoms by caregivers, particularly when caregivers experience poor health. In addition, with caregiver health additionally controlled for, partial correlation analyses showed a significant relationship between role importance and T2 depression. This suggests that health is an important consideration when examining caregiver depression, and, under these circumstances, that familial role importance may have an influence on caregiver depression.

Strengths and Limitations

The longitudinal nature of this study’s design is a strength that allows for a developmental perspective of the caregiving process among familial caregivers (Hofer & Sliwinski, 2006). Due to the measurement of depression at two time points, the effects of previous depression were controlled for. Such effects of prior symptomology may go unacknowledged in studies of mental health outcomes that include only one time of measurement. This study also examined both the interindividual experience of role importance and the intraindividual experience of affectional solidarity as they impact caregiver outcomes, and, in effect, acknowledged the dyadic nature of caregiving relationships.

Despite substantial strengths in the study design, the small sample size, \( N = 57 \), limited statistical power in the current study. Although longitudinal data were used, with two times of measurement three years apart, more frequent assessment of caregiver appraisals of familial role, relationship quality, and depressive symptoms might provide greater continuity and understanding of the caregiving process, as well as the relationships between predictors and
outcome.

The regression analyses examined only caregiver self-reported attitudes of affectional solidarity, which may or may not be consistent with care recipient reports of emotional relationship quality with the caregivers. The tested models included only half of the dyadic caregiving relationship, which simplifies a complex dynamic relationship between caregiver and care-recipient (Lyons et al., 2002). The sample included both children caring for parents and grandchildren caring for grandparents; and, therefore, findings may be muddled due to the combination of these two groups with differential caregiving relationships. Also, life events not related to caregiving may have influenced caregiver depressive symptoms over time. Inclusion and control of life event variables, such as illness, divorce, and bereavement, which might influence role importance, affectional solidarity, and depression may have clarified and strengthened models tested in the current study. No formal measure of social support was available to examine whether a relationship between affectional solidarity with care recipient and caregiver perceptions of social support exists. This limited the ability of current analyses to assess theoretical models of stress and coping which grounded hypotheses.

Implications for Future Research

In response to the need for the development of theoretically driven models of parent-child support and relationship quality and the implications of such factors for adults in later life (Fingerman & Birditt, 2011), analyses endeavored to prospectively examine links between role importance, affectional solidarity, and depression among familial caregivers over time. The finding that T1 depression significantly predicted depression at T2 indicates that longitudinal models of caregiver depression should include prior depressive symptoms. The proposed models’ hypotheses were not supported, but point to the importance of considering the emotional
relationship quality between caregivers and the family members for whom they provide care when investigating caregiver experiences and outcomes. Future research that includes a measure of socioemotional support garnered from care recipients may capture a greater amount of variance than models that omit this facet of the familial caregiving context.

In light of the theoretical frameworks regarding familial caregiver stress and coping outlined by Gatz et al. (1990) and Pearlin et al. (1990), analyses both support and de-emphasize elements of these models. Results support Pearlin et al.’s (1990) inclusion of caregiver relationship to care recipient and relational deprivation, but not role conflicts or self-appraisals in models of caregiver stress when predicting outcomes such as depression. Gatz et al.’s (1990) framework that would appear to classify affectional solidarity as a social support resource might more accurately reflect this study’s findings. However, because the role of affectional solidarity with care recipient was inferred to fit into the model as a social support resource, no firm conclusions regarding theoretical fit are warranted. Future research that includes analysis of the relationship between caregiver and care-recipient emotional relationship quality and measures of social support may serve to clarify the fit of these theoretical models of caregiver experience. Factor analysis of individual affectional solidarity and social support items might serve to confirm or disconfirm whether the emotional relationship with the care-recipient can be accurately conceptualized as part of the social support system available to caregivers.

Implications for Practice

Practitioners who are interested in understanding the development and maintenance of depression in familial caregivers over time can take away from the current study an appreciation of the complex array of factors that contribute to both vulnerability to as well as protection from negative mental health consequences of caregiving. Previous research indicated the importance
of caregiver, care-recipient, and contextual factors that contribute to caregiving stress (Alspaugh et al., 1999; Gaugler et al., 2005; Lee et al., 2001). The current study aimed to elucidate a portion of the appraisal process, namely the influence of caregiver attitudes toward their prior familial roles, as it interacts with the quality of relationship between the caregiver and care recipient, or affectional solidarity. Although the proposed model was not supported in the current sample, this study does point to the importance of a positive emotional relationship with the familial care recipient among caregivers who experienced low levels of depressive symptoms over time. Thus, it will be important to assess the quality of relationship between the caregiver and family member receiving care, as well as any changes that have occurred in the relationship due to the need for caregiving. In addition, the longitudinal nature of depressive symptoms in caregivers was apparent in this sample, and findings emphasize the importance of evaluating caregivers for a history of depression.

A potential area of stress for familial caregivers involves the care-recipient’s health that precipitated a need for care (Michon et al., 2005). If the family member experiences cognitive decline or reduced ability to communicate, this likely represents a loss, or anticipated loss, of the prior relationship and perhaps reduced social support for the familial caregiver (Lyons et al., 2002; Meuser & Marwit, 2001). In addition, the caregiver’s acceptance of the caregiving role (versus the dissonance experienced compared to how he or she defines his or her familial role) may be an important factor to evaluate when working with familial caregivers. Practitioners can help caregivers maintain realistic expectations regarding prior familial roles, their role as caregiver, and provide education about the process of caregiver identity adoption (Lang, 2004). Normalization of adjustment to the shifting roles in relation to family may help facilitate role transitions among individuals who face evolving caregiving role demands.
Indeed, the grief process is initiated as the caregiver recognizes that the relationship with a family member that once was is no more, even though the care recipient is still part of his or her life (Corr & Coor, 2013). In many cases, this grief is intensified because the family member now relies on the caregiver for one or more daily needs (Connidis, 2010). Practitioners can help familial caregivers grieve the loss of such socioemotional support and find alternative means of meeting those needs, especially as caregiving demands increase.

Additionally, practitioners can communicate to familial caregivers the importance of attending to their physical health as well as their mental health. Caregivers might have limited opportunities to attend to their health when assuming greater amounts of caregiving responsibility (Montgomery et al., 2007; Vitaliano, Young & Zhang, 2004). The old airplane safety maxim that stresses the importance of securing one’s own oxygen mask before assisting another with his or hers seems particularly relevant for familial caregivers who often do not take time to care for themselves. Professionals who consult with familial caregivers, whether as the primary patient or those that accompany a family member to medical appointments, are uniquely poised to illustrate the importance of maintaining health and well-being in order to continue to provide care for aging family members.
Figure 1. Moderation model
### Table 1

*Correlations between Demographic, Predictor, Moderator, and Dependent Variables*

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<th>Age</th>
<th>Ethnicity</th>
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<th>Role Importance</th>
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<td>-.29*</td>
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*p < .05, **p < .01, ***p < .001
Table 2

*Hypothesis 1: Main Effect of Role Importance on T2 Depression*

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*p < .05, **p < .01, ***p < .001

Table 3

*Hypothesis 2: Affectional Solidarity Moderates Effect of Role Importance on T2 Depression*

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*p < .05, **p < .01, ***p < .001
### Table 4

**Hypothesis 1: Control for Health in Main Effect of Role Importance on T2 Depression**

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*p < .05, **p < .01, ***p < .001

### Table 5

**Hypothesis 2: Control for Health in Affectional Solidarity Moderates Effect of Role Importance on T2 Depression**

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<tr>
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*p < .05, **p < .01, ***p < .001
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