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March 28, 2012

Family Involvement and Well-being in an Assisted Living Population

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An abstract of

a thesis submitted to the Faculty of Emory College of Arts and Sciences

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Bachelor of Arts with Honors

Department of Psychology

#### Abstract

# Family Involvement and Well-being in an Assisted Living Population By Evan J. Plys

Family visitations provide residents of long term care facilities a link to the outside world, continuity of relationships, and social support (Tseng & Wang, 2001; Thomas, 2001). Previous research suggests that the quality of family relationships may have greater mental health impacts for older adults than the quantity of family interactions (Conner, Powers, & Bultena, 1979). This study investigated the relationship between the quantity of family interactions and the quality of family relationships and their impact on long term care residents' life satisfaction and depression. Factors influencing the quality of relationships between residents and their primary family caregiver also were of interest. Forty-four residents of four assisted living facilities were sampled. Participants completed four measures assessing emotional bondedness to family, perceived social support, life satisfaction, and depression. In addition, open-ended interviews assessed residents' perceptions of family interactions. Multiple regression analysis revealed that the quality of family relationships better predicted life satisfaction and depression than the quantity of family interactions. In addition, number of socio-emotional support activities between family and residents correlated with higher emotional bondedness. Families who reminisced also showed higher scores of emotional bondedness, suggesting reminiscing might be a tool for families to improve the quality of interactions with institutionalized elders. The current study also investigated self-rated health, internal friendships, and family involvement as predictors of life satisfaction and depression for assisted living residents. These results have implications for residents of long term care facilities and their family members, as well as, staff and social workers.

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Introduction	1
Senior Housing	1
Family Visitation Patterns	3
Role of Family in Long Term Care	4
Content of Family Visits	. 6
Mental Health and Family Visits	
Quantity vs. Quality	
Statement of Problem and Hypotheses	12
Methods	
Participants	13
Procedures	14
Measures	16
Results	18
Resident Characteristics	18
Caregiver Characteristics	19
Preliminary Analysis	19
Quantitative Analysis	20
Life Satisfaction	20
Depression	20
Emotional Bondedness	21
Qualitative Analysis	21
Inter-rater Reliability	21
Responses	22
Supplementary Analysis	23
Quality vs. Quantity	23
Life Satisfaction and Depression	23
	25
Discussion	
Quantity vs. Quality	
Emotional Bondedness	
Study Limitations	39
Conclusion	40
References	41
Appendix A	
Appendix B	

# Table of Contents

Family Involvement and Well-being in an Assisted Living Population

There are approximately 975,000 residents of assisted living facilities in the United States (National Center for Assisted Living, 2008). Assisted living facilities are private pay communities that promote an autonomous lifestyle for elderly residents, while providing 24-hour supervision (National Center for Assisted Living, 2008). These facilities encourage family involvement and view external relationships as an integral part of care (ALFA, 1998, as cited in Port et al., 2005). Family plays an important role in the lives of assisted living residents, often providing physical and emotional care complementary to staff. Institutionalized elders report family interactions as having the greatest impact on perceived social support and quality of life (Tseng & Wang, 2001). In addition, older adults who lack social ties show higher rates of mortality (Berkman & Syme, 1979). Despite the physical and emotional benefits of family involvement, few studies have investigated these relationships in the context of mental health outcomes in an assisted living population. The current study differentiates the quantity and quality of family interactions and their impact on assisted living residents' life satisfaction and depression. This study also identifies factors that influence the quality of relationships between assisted living residents and their primary family caregivers.

# **Overview of Senior Housing**

There are three main types of long-term senior housing: independent living, nursing homes, and assisted living. It is important to note that the majority of Americans will never enter long term care facilities. Only about 10% of the population over 65 lives in some type of senior housing (Moody, 2010). Of these three sectors of senior housing, both independent and assisted living facilities are private pay communities. Assisted living facilities differ from independent living communities because they provide 24-hour supervision, meals, and additional health services (National Center for Assisted Living, 2008). Residents of assisted living facilities typically have more physical and cognitive deficits than independent living residents. On average, assisted living residents require help with 1.6 activities of daily living (ADLs), such as bathing, dressing, transferring, eating, and toileting, and about one third report moderate to severe cognitive impairment (National Center for Assisted Living, 2008; Hawes, Rose, & Phillips, 1999). Nursing homes differ from independent and assisted living facilities because they accept Medicare and Medicaid as payment. The current study focuses on an assisted living population. Much of the previous research on institutionalized elderly populations fails to make the distinction between independent living, assisted living, and nursing home care. Therefore, when reviewing the literature, the term "long term care facility" is used when authors do not identify which population was studied.

The institutionalization of an elderly relative is a last resort for many families. There are numerous factors that contribute to the decision to admit a relative to long term care. Seventy-seven percent of assisted living residents moved directly from a private or family home (National Center for Assisted Living, 2008). Most families decide to move their elderly relative into long term care when physical or cognitive health declines or the burden associated with in-home care increases. Sixty-eight percent of relatives of nursing home patients reported declines in health as the most important factor for institutionalization, while 20% reported reduced capacity for caregiving as the most important factor (McFall & Miller, 1992). Numerous studies have replicated these findings and gerontologists recognize rapid declines in physical or cognitive health and caregiver stress as the primary factors predicting institutionalization (see Naleppa, 1996, for a review).

## **Family Visitation Patterns**

Popular culture stigmatizes long term care facilities by presenting them as places where residents are segregated and/or abandoned by their family. The abandonment myth of institutionalized elders has been dispelled by research on family involvement in long term care facilities (Naleppa, 1996). A large body of literature shows that family caregivers continue to provide emotional and physical support for their elderly relative following institutionalization (Naleppa, 1996; Port et al., 2001; Yamamoto-Mitani, Aneshensel, & Levy-Storms, 2002; Gaugler, 2005). In one study, 79% of families contacted their elderly, institutionalized relative at least once a week (Moss & Kurland, 1979, as cited in Gaugler, 2005). Port et al. (2005) found that in an assisted living population, family members spent over 4 hours each week visiting or calling residents. Another study found over half of the 349 nursing home residents interviewed reported at least one visitor, and 80% of the reported visitors were family members. In addition, the majority (36.1%) of visitors came on a weekly basis (Hook, Sobal & Oak, 1982). A 5year longitudinal study found that most family members stayed stable in their frequency of visitations (Yamamoto-Mitani et al., 2002). Similarly, Gaugler, Pot, & Zarit (2007) found family caregivers of residents with dementia stayed stable in the frequency of visitations at a 6 and 12-month follow up. Although these findings suggest that families continue to involve themselves in the care of institutionalized elders, many of these studies are limited by relying on information from the caregiver and not the resident. Sampling just the caregiver may result in biased reports of the frequency of visitations.

Due to the high prevalence of cognitive impairment in nursing homes and assisted living facilities, residents are rarely surveyed or interviewed about family relationships.

There are many factors that influence family visitation patterns in long term care facilities. Port et al. (2001) found higher frequencies of visitations were associated with living in a private pay community, family and friends living less than an hour away, strong relationships prior to institutionalization, and the first 6 months in long term care. Severe cognitive impairment and African-American status were associated with fewer visits (Port et al., 2001). Pulling together the findings from previous research on factors influencing family visitations, Gaugler, Anderson, & Leach (2003) proposed a conceptual model. Resident setting (e.g., nursing home, assisted living, or independent living), resident background (e.g., length of stay, race, marital status, and number of children), family context (e.g., race, kinship, and distance to facility), resident function (e.g., cognitive status, chronic diseases, and physical dependency), and staff background were cited as the significant predictors of family visitation patterns.

#### **Role of Family in Long Term Care**

Eugene Litwak proposed the task specific theory to outline specific roles for family and professionals that would optimize care of community living and institutionalized elderly populations (Litwak, Messeri, & Silverstein, 1990). He argues that different groups should carry out specific tasks depending on their kinship, commitment, proximity and specialization in a particular set of skills. This theory is applied to family involvement in long term care by stating care can be optimized if families do not over or underestimate their responsibilities and leave highly specialized tasks to professionals. This does not mean, however, that family cannot contribute to care following institutionalization. Families provide weekly meals, furniture, and grooming supplementary to the standardization of these items and activities offered by long term care facilities. Litwak et al. (1990) state, however, "Those children who are so demanding that they violate the universalism of the nursing home staff could be encouraged to spend less time in the nursing home, while children whose parents suffer because they do not visit at all could be encouraged to come in (p. 185)." This suggests an inverted U-shape model for family involvement in long term care. Litwak et al. (1990) also proposed the need for a defined balance of care activities between staff and family. Staff members working in long term care facilities become very important in the lives of residents after institutionalization. The division of care between staff and family may help to optimize the physical and emotional well-being of long term care residents.

Litwak proposed that staff should be responsible for specialized technical tasks, while family should be more involved in non-technical tasks and economic issues (Dobrof & Litwak, 1977). In support of this view, Dempsey & Pruchno (1993) reported the majority of adult children felt staff should be solely responsible for personal care and family should be solely responsible for finances, medical decisions, and writing letters. In another study, family caregivers believed most care decisions and technical tasks should be left to staff, however, staff should consult family prior to implementing care (Duncan & Morgan, 1994, as cited in Napella, 1996). In addition, Keefe & Fancey (2000) found family members who reported changes in responsibilities after institutionalization reported these changes mostly in the area of direct responsibilities (e.g., transportation, laundry, medication). Rubin & Shuttlesworth (1983) developed a 100-item task inventory to compare the responsibilities carried out by family and staff. Staff was primarily responsible for medical, dietary, and housekeeping tasks, while family was primarily responsible for providing extra items (e.g., plants, money, televisions, radios). There was also role ambiguity, where certain tasks (e.g., reporting abuse or neglect, laundry, hair appointments) were categorized as joint responsibilities between staff and family. This inventory, however, failed to include socio-emotional support activities as 'tasks' provided by family and institution staff. Family and staff involve themselves in a range of care including emotional support, assistance with ADLs, and instrumental activities of daily living (IADLs), which includes handling finances and scheduling doctor appointments (Port, 2005).

### **Content of Family Visits**

During visitations, families most frequently engage in socio-emotional support activities. There are numerous studies supporting this claim (Gaugler & Kane, 2007; Thompson, Weber & Juozapavicius, 2001; Abbey, Schneider, & Mozley, 1999). Abbey et al. (1999) found that 94% of family members reported providing emotional support for long term care residents during visits, while only 7% helped with ADLs. Similarly, assisted living visitors spent more time sitting, reminiscing, and talking about family than laundry or business items (Thompson, Weber & Juozapavicius, 2001). Family members spend more time engaging in socio-emotional support for two reasons. First, many family member relinquish technical tasks to staff (Keefe & Fancey, 2000). Second, after reviewing themes from various qualitative studies, Gaugler & Kane (2007) reported family members engage in socio-emotional support to preserve residents' well-being. Since socio-emotional support is a broad category, it is important to understand what types of activities families engage in to preserve residents' well-being. However, there is only a small body of literature that discusses the content of family visits, and much of this literature fails to cite specific care activities.

There is evidence that the number of practical and emotional care activities may have an impact on the perceived quality of visitations and relationship between residents and family. Residents reporting a reciprocal relationship felt closer to their family members (Snow & Crapo, 1982), raising the question if socio-emotional support may be more beneficial than ADLs/IADLs to maintaining a positive relationship. However, other studies show the number of ADL/IADLs performed by family and socio-emotional support depended on the needs of each resident, suggesting a model of selective care (Gaugler et al., 2003). In support of a selective care model, Keefe and Fancy (2000) found that family members reported their responsibilities changed over the course of admittance to long term care due to changes in residents' health. Changes in residents' mental and physical functioning shifted family members responsibilities from direct (i.e., engaging in activities) to indirect (i.e., monitoring care). Family members of residents who became physically frail or cognitively impaired after institutionalization, reported engaging in less activities; however, they reported being on call more and felt more responsibility to monitor care. These results suggest that families engage in a range of activities, and the physical and mental health capabilities of their institutionalized relative may determine the types of activities family are able to engage in.

A gap in the existing literature on family visits in long term care is that the relationship between practical (ADLs/IADLs) and emotional care has not previously been correlated with mental health measures. Gaugler & Kane (2007) cite a common theme of family members wanting to preserve residents' well-being through visitations, however,

without studies using mental health measures, such as life satisfaction or depression, well-being cannot be properly defined and therefore the benefits of visitations cannot be quantified. In addition, by using reliable and valid measures researchers can find associations between visitations and well-being that do not reflect the perception or desired outcome of the caregiver.

The primary studies addressing mental health benefits of the content of family visitations evaluate the impact of family intervention programs. Family intervention programs are important because they show links between what occurs during visits and residents' well-being. McCallion, Toseland, & Freeman (1999) developed an education program for family members of long term care residents with dementia. The program was designed to improve verbal and non-verbal communication between family and residents, as well as effective structuring of family visits. Residents of families trained in the intervention program reported lower levels of depression and less irritability. Similar intervention programs focus on training family members to use more positive facial affect and eye contact during visitations (Levy-Storms, 2011). Although these programs targeted family members of residents diagnosed with dementia, these findings suggest that families can impact the mental health of institutionalized elders through visitations.

Family visitations provide residents of long term care facilities the opportunity to continue their roles as parent, grandparent, spouse, etc., in addition to the continuity of activities they enjoyed with their family prior to institutionalization. The activity theory of aging states that the more active people stay in old age, the more likely they are to be satisfied with their life (Havighurst, 1961). The theory goes on to posit that in old age, people who continue their societal roles and recreational activities will be the most

satisfied. In support of themes from the activity theory of aging, palliative care patients reported the continuity of relationships through visitations helped "maintain links to the outside world" and was "something to look forward to" (Thomas, 2001). Family visits also provide residents with an opportunity to stay more active physically through taking trips outside of the facility. Thompson et al. (2001) reported that family members took assisted living residents out shopping, to restaurants, church, civic centers and movies. Traveling with family members provides residents the ability to continue recreation activities not offered through events sponsored by the facility. The activity theory of aging suggests that families who aid an autonomous lifestyle and continue shared interests through visits may improve or maintain emotional well-being in long term care residents.

#### Mental Health and Family Visits

Long term care facilities are interested in the literature on family visitations because of the potential impact on residents' well-being. Facilities emphasize the maintenance of high life satisfaction for each resident. The National Center for Assisted Living (2008) reported that they "provide a range of services that promote resident quality of life". Despite the importance of family interactions and the priority placed by institutions on quality of life, the literature on life satisfaction and familial relationships in long term care is sparse. Harel (1981) found that continuity of social ties was significantly related to life satisfaction, however this was not specific to family members. Another study reported that more frequent family interaction was the strongest predictor of perceived social support and quality of life, however, when physical health was controlled this relationship only explained a small percentage of variance in total life satisfaction (Tseng & Wang, 2001).

Correlates of depression are of interest to many researchers studying institutionalized elders given its high prevalence in this population. Nearly 20% of Americans over the age of 65 are affected by depression (Duckworth, 2009). Furthermore, elderly living in long term care facilities report higher rates of depression than community living seniors (Rotenberg & Hamel, 1988). Few studies have correlated family interactions to measures of depression. Greene & Monahan (1988) found strong negative correlations between the frequency of family visitations and depression; however the authors used a general psychosocial impairment scale, which included depression as one of many factors rather than an inventory designed to measure symptoms of depression.

Other studies have found selective support, or providing care specific to the needs of residents, to be more important for mental health (Gaugler et al., 2003; Weinberger, Hiner, & Tierney, 1987). Weinberger et al. (1987) reported the frequency of family visitations strongly correlated with emotional support, only when residents' ratings of emotional support needed were high. Although the authors did not use life satisfaction or depression scales, they suggest selective care is beneficial to these mental health outcomes. The view of selective care raises the question if the mental health benefits of family visitations are derived through emotional support provided by family members, because only when residents received the emotional support needed, did their well-being improve. While many studies on family interaction have focused on the number of visitations, there is a smaller body of literature that believes the quality of family interactions, rather than the quantity of family interactions, are more beneficial to the mental health of long term care residents.

## Quality vs. Quantity of Visits

Conner et al. (1979) proposed there must be factors other than the frequency of visitations affecting long term care residents' well-being. "We have been working from the assumption that more is better... attention should be shifted from questions of how many and how often to the meaning of social relationships and the interaction process (p. 120)." The importance of the quality of family relationships is congruent with themes from Laura Carstensen's socio-emotional selectivity theory. Socio-emotional selectivity theory states that as adults enter old age they engage in a strategic selection process to cultivate social networks that maximize emotional gains and minimize emotional risks (Carstensen, 1992). In a population of male outpatients at the Veterans Administration Medical Center, Snow and Crapo (1982) found strong correlations between emotional bondedness to a family member or friend and life satisfaction and subjective well-being. In addition, self-rated health and emotional bondedness were the two largest predictors of life satisfaction in this study. Another study reported that perceived quality, not quantity of family interactions greater predicted well-being in elderly women (Beckman, 1981).

Despite these findings, there is evidence that the frequency of visitations and the quality of relationships with visitors may not be mutually exclusive. Rotenberg & Hamel (1988) found that higher frequencies of visits with "intimate contacts" had a strong negative correlation to depression; however, this study was not specific to family members. Since family members do provide the most social support and account for the majority of outside social interaction for residents of long term care facilities (Tseng &

#### FAMILY INVOLVEMENT AND WELL-BEING

Wang, 2001), it is important to target family visits for future research on social interaction and emotional well-being. Bengtson (2001) provides a definition of a tight-knit kin relationship as being close in affect, reaching consensus, staying close in proximity, having frequent contact, giving help, and receiving help. This definition includes both frequency and quality of contact; however, staying close in proximity and frequent contact in the absence of these other factors defines an obligatory relationship.

Since the median age of Americans is continuing to rise, there is an increasing need to study the dynamics of family relationships in older adults (Moody, 2010). Bengtson (2001) argues that the increase in the proportion of people living over the age of 65 means intergenerational relationships will be increasingly important to providing physical and emotional support. This need for continued intergenerational relationships is termed the "longer years of shared lives". Therefore, adult children and their elderly parents now continue ties and physical and emotional care for longer periods of time. Intergenerational relationships are important to family interaction in long term care facilities because the majority of primary family caregivers are adult children (Naleppa, 1996; Gottesman, 1974; Port et al., 2005; Yamamoto-Mitani, 2002).

#### **Statement of Problem and Hypotheses**

The current literature on the quality of family relationships in old age clearly shows that strong relationships are an important part of healthy aging. This literature is limited, however, by phenomenological design, a lack of focus on mental health outcomes, the omission of long term care residents from samples, and the failure to distinguish between quantity of family visits and the quality of family relationships (Thomas, 2001; Piechnichzek-Buczek et al., 2007; Beckman, 1981; Snow & Crapo,

1982). Since family visits are viewed as links to the "outside world" and "something to look forward to" (Thomas, 2001), visitations may be the mechanism for providing emotional support and thus should be a main focus of inquiry. The current study will improve upon the existing literature by using both qualitative and quantitative methods to study the associations between the frequency and content of family visitations and their impacts on emotional bondedness, life satisfaction and depression in an assisted living population.

The current study will first investigate the relationship between the quantity of contact with family and the quality of family relationships, and their impact on life satisfaction and depression. When both quality and quantity of social interactions were measured, quality better predicted high emotional well-being in older adults (Beckman, 1981). Therefore, I predict residents with high emotional bondedness to a family member will report higher levels of life satisfaction and lower levels of depression, and this effect will be greater than the frequency of family contact. Next, the author will investigate the interaction between practical and emotional care and their associations to the quality of familial relationships. Since reciprocal care and emotional intimacy both predict greater quality of relationships (Snow & Crapo, 1982; Rotenberg & Hamel, 1988), I expect a greater ratio of socio-emotional support to ADLs/IADLs will correlate with higher emotional bondedness between residents and their primary family visitor.

#### Methods

#### Participants

Forty-four residents from 4 assisted living facilities participated in the current study. Three facilities were located in Georgia, one in New Jersey. All four sites were

private pay communities with an average monthly room cost ranging from \$2,839-\$3,567. The facilities ranged in size from 18-60 residents. Participants' ages ranged from 78-103 (M = 89.59, SD = 5.31). Thirty-four participants were female (77.3%) and 10 were male (22.7%). The majority of long term care residents are female, and the current sample is similar to other findings of gender breakdowns in long-term care facilities (Gottesman, 1974). Forty-two participants (95.5%), of the current sample identified their racial status as White; the other 2 (4.5%) identified their race as Asian. Eight participants (18.2%) lived in their current facility for 6 months to 1 year, 16 (36.4%) lived there for 1-2 years, and 20 (45.5%) lived in the same facility for over 2 years. Residents of private pay communities are shown to have higher levels of education, compared to nursing home residents (Port et al., 2005). In the current sample, 13 participants (29.5%) had an education level of masters degree or higher, 11 (25%) had a bachelors degree or equivalent, 10 (22.7%) had some college education, but no degree, 9 (20.5%) had a high school diploma, and one (2.3%) had less than a high school diploma. See table 1 for detailed participant demographic information.

## Procedures

Recruitment letters explaining the purpose and procedures of the current study were mailed to each assisted living resident in the four targeted facilities. Residents interested in participating in the study were encouraged to contact the investigator or activity directors at each facility. In addition, administrators or activity directors approached potential participants and asked their interest in participating in the current study. The primary investigator contacted residents agreeing to participate in the study, and interview times were scheduled. To ensure a representative sample, no more than 20 residents were recruited at one facility. In addition, each facility was given the option of mailing letters to family members of potential participants so they would be aware of the study. All potential participants were informed that their participation in the current study was voluntary and refusal to participate would have no impact on their receipt of services from the facility.

Prior to the interview, participants were asked a series of questions to determine their eligibility for the study. Verbal consent was obtained to administer the mini-mental state exam (MMSE) and demographic information. Residents were eligible for the study if they (a) were a current resident of an assisted living facility, (b) lived in their current facility for over 6 months, (c) scored 23 or higher on the MMSE, and (d) had at least yearly contact with family. Residents who met all of these criteria were then asked to continue with the interview process and written consent was obtained for the remainder of the study.

Participants were interviewed in their rooms to ensure privacy and confidentiality. Participants were asked additional background questions, responded to items on four closed-ended measures, and were asked open ended-interview questions. Open-ended interviews typically lasted between 10-15 minutes and were audio recorded. The entire interview process including questions to determine eligibility typically lasted between 40-60 minutes. For each close-ended questionnaire, the interviewer read items while residents referred to laminated sheets that contained large print Likert responses. Participants were informed they could stop the interview at any time and had the opportunity to have their data not appear in the study. However, all participants finished the interview and agreed that their audio taped recordings could be used. **Apparatus.** Open-ended interviews were recorded on a Marantz PMD660 portable digital recorder. Recordings were then transferred directly from the device to a password protected desktop computer in the form of mp3 files.

**Ratings.** Two independent raters coded each recorded interview. Raters were two female, undergraduate students. Raters were trained in recursive abstraction (Creswell, 2007) and applied this qualitative method to digital files derived from audio recordings of each interview. Each rater paraphrased the core meaning of statements made in response to general questions. These phrases were then further reduced to core themes. Core themes were placed on a structured rating form by the investigator. Once core themes were identified, each rater reviewed all audio recordings and coded for core themes in four separate categories.

#### Measures

**Cognitive ability.** To determine eligibility for the current study, each participant's cognitive ability was assessed using the Mini-mental State Exam (MMSE) (Folstein, Folstein, & McHugh, 1975). The MMSE is an assessment of cognitive ability commonly used in an elderly population (McCallion et al., 1999). Scores on the MMSE range from 0-30, with scores of 22 and below suggesting moderate to severe cognitive impairment (Folstein et al., 1975). In order for participants to qualify for the current study, a score of 23 or higher was required on the MMSE. Scores of 23 or higher are thought to reflect mild or no cognitive impairment. The MMSE has shown strong reliability with test-retest values ranging from .80 to .98 (Folstein et al., 1975).

**Emotional bondedness.** The quality of family relationships was assessed using the Emotional Bondedness Scale (Snow, 1980). The Emotional Bondedness Scale was

developed to be used in an elderly population and has shown strong reliability with Cronbach's alpha ranging from .82-.83 (Snow, 1980; Snow & Crapo, 1982). In addition, emotional bondedness scores were compared with open-ended interview data to assess concurrent validity (Snow, 1980). The Emotional Bondedness Scale has 12 questions in which the respondent rates their relationship with "the person you most trust or confide in" (Snow & Crapo, 1982). The current study modified this statement slightly to ask, "The family member you feel does the most for you". Each question is answered on a 3point scale, 1 = "Not at all true of him/her", 2 = "Somewhat true of him/her", 3 = "Very true of him/her". Total scores range from 12-36, with higher scores indicating greater emotional bondedness to the target. In addition, five negative worded items were reverse coded at data entry.

**Social support.** Perceived social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). This scale has previously been used in research with older adults (Park, 2009). The family subscale was the only part of this measure used in the current study. The MSPSS has shown strong reliability, Cronbach's alpha .89 (Park, 2009), and the family subscale is shown to have high reliability for each item (Chen & Chang, 2004). The family subscale asks four questions on a 5-point likert scale, 1 = "Strongly Disagree", 3 = "Neutral", 5 = "Strongly Agree" (Zimet et al., 1988). Total scores range from 4-20, with higher scores indicating greater perceived social support. None of the items on the MSPSS are in need of reverse coding.

Life satisfaction. Life satisfaction was measured using the Life Satisfaction Index A-Short Form (LSITA-SF) (Barrett & Murk, 2006). The LSITA-SF was developed to be used in an elderly population and has shown strong reliability, Cronbach's alpha .90 (Barrett & Murk, 2006). The measure consists of 12 items on a 6-point likert scale, 1 ="Strongly Disagree", 2 = "Disagree", 3 = "Somewhat Disagree", 4 = "Somewhat Agree", 5 = "Agree", 6 = "Strongly Agree". Total scores range from 12-72, with higher scores suggesting greater life satisfaction. Eight questions are positively worded; the other four negatively worded items were reverse coded at data entry.

**Depression.** Depression was measured using the Geriatric Depression Scale-Short Version (GDS-S) (Sheikh & Yesavage, 1986). The GDS-S was developed to assess depression in an elderly population. The scale consists of 15 "yes" or "no" items. After reverse coding, scores of 5 or greater suggest mild to severe depression (Sheikh & Yesavage, 1986). The GDS-S is shown to have good reliability, Cronbach's alpha .76. The GDS-S also has high negative predictability, 97%, showing strong clinical diagnostic value (Van Marwijk et al., 1995).

#### Results

## **Resident Characteristics**

There were no significant differences in age, depression, life satisfaction, emotional bondedness, frequency of visitations, the number of ADLs, IADLs, or socioemotional support provided by family, self-rated physical health, or staff relations between residents living in facilities in New Jersey and Georgia. Residents of facilities in Georgia did receive more face-to-face visits (t (42) =1.663, p =.052, d =.513), which can be accounted for by primary family caregivers on average living closer to the facility (Yamamoto-Mitani et al., 2002). Primary family caregivers of residents in Georgia on average lived within an hour of the facilities, while New Jersey primary family caregivers on average lived 1-2 hours from the facility. These differences, however, did not affect the outcome measures of depression, life satisfaction, or emotional bondedness.

## **Caregiver Characteristics**

Contact with primary family caregivers ranged from 0-56 times per month (physical visits, telephone or e-mail conversations), with an average rate of close to 12 encounters (M = 11.99, SD = 12.22). In addition, caregivers were in contact with their family members between 0-38 hours per month, with a mean of 10.90 hours (SD =10.05). Nine (20.5%) caregivers were in daily contact, 27 (61.4%) were in contact weekly, 7 (15.9%) were in contact monthly, and 1 (2.3%) was in contact yearly. Twentyseven (61.4%) caregivers physically visited the facility as their primary means of contact, 16 (36.4%) caregivers used the telephone, and 1 (2.3%) caregiver used e-mail. Twentyfour (54.5%) of the primary family caregivers were daughters of the residents, 14 (31.8%) were sons, one sister (2.3%) and one wife (2.3%) were reported to be the primary family caregiver, and 4 (9.1%) primary family caregivers were non-first kin family members, including nieces and nephews. Twenty (45.5%) family caregivers lived within 30 minutes of the facility, 5 (11.4%) lived between 30 minutes to 1 hour away, 4 (9.1%) lived 1-2 hours away, and 15 (34.1%) lived more than 2 hours away from the facility. See table 2 for detailed caregiver demographic information.

#### **Preliminary Analysis**

A Kolmogorov-Smirnov test was performed on each testing variable prior to analyzing the data. Emotional bondedness and perceived social support were both shown to have high negative skew. Therefore, prior to analysis an inverse transformation was performed on both of these variables.

## **Quantitative Analysis**

**Life Satisfaction.** Higher emotional bondedness to a primary family caregiver was hypothesized to correlate with higher scores of life satisfaction. Pearson's correlation coefficient revealed this relationship was statistically significant (r = .344, p = .022). The frequency of contact with a primary family caregiver was not significantly correlated with life satisfaction (r = .135, p = .383) (see table 3).

Since the frequency of family interactions was not significantly correlated with life satisfaction, a multiple regression analysis was not performed for emotional bondedness and frequency of contact with primary family caregivers as predictors of life satisfaction.

**Depression.** Higher emotional bondedness to a primary family caregiver was hypothesized to correlate with lower scores of depression. Pearson's correlation coefficient revealed this relationship was statistically significant (r = -.477, p = .001). In addition, the frequency of contact with a primary family caregiver also yielded a statically significant negative correlation to depression (r = -.312, p = .039) (see table 4).

Hierarchical multiple regression was used to examine the frequency of contact with a primary family caregiver and the emotional bondedness to that caregiver as predictors of depression. In the first step, depression was regressed on the frequency of contact with a primary family caregiver ( $\beta = -.312$ , SE = .027, t (42) = -2.879, p = .039), explaining 9.7% of the total variance in depression. In step two, emotional bondedness was added to the model and explained an additional 15.2% of the variance in depression ( $\Delta F$  (1, 41) = 8.288, p = .006). Interestingly, when emotional bondedness was added to the model, frequency of visits was no longer statistically significant ( $\beta = ..159$ , SE = .027, t (41) =-1.092, p =.281). The total model was statistically significant (F (2, 41) = 6.796, p =.003), and explained 24.9% of the overall variance in depression (see table 4).

**Emotional bondedness.** A greater ratio of socio-emotional support to ADLs/IADLs was hypothesized to correlate with higher emotional bondedness between residents and their primary family caregiver. Pearson's correlation coefficient revealed a small and not statistically significant negative association between these variables (r =-.037, p =.810). These results were in the opposite direction of the hypothesis. Pearson's correlation coefficient, however, revealed a statistically significant positive correlation between the number of socio-emotional care activities and emotional bondedness (r=.468, p =.001). Similarly, the number of intimate conversation topics yielded a statistically significant positive correlation to emotional bondedness (r =.323, p =.032). It is worth noting that the number of ADLs/IADLs performed by family members also yielded a statistically significant positive relationship to emotional bondedness (r =.354, p =.019) (see table 6).

#### **Qualitative Analysis**

Inter-rater reliability. Inter-rater reliability for thematic ratings was established on a random selection of 25% of interviews. Following the initial extraction of 4 categories, each rater independently identified whether transcripts included specific themes within each category. Pearson's correlation coefficients ranged from .55 (The role of family) to .99 (Preferences for family involvement) with an overall inter-rater reliability across themes of .81. **Responses**. Responses fell into four general themes closely tied to the questions asked: 1) preferences for family involvement, 2) perceptions of family visits, 3) the role of family, and 4) why family relationships are important.

*Preferences for family involvement.* The majority of participants stated the emotional support derived from each family visit (51.2%) was most important for the relationship with family members. An additional 23.3% stated the frequency of visits was most important, 20.9% felt both frequency and quality were of equal importance, and 4.6% felt neither frequency or quality was important for family relationships.

*Perceptions of family visits.* Participants looked forward to family visits primarily to continue family ties (42.9%). An additional 17.1% looked forward to visits because it made them feel cared for, 17.1% looked forward to visits because it was something to do, 8.6% looked forward to visits for the continuity of activities with family, 5.7% looked forward to visits to see familiar faces, and 5.7% looked forward to visits in order to give parental advice. Only one resident looked forward to visits to gain help with personal care.

*The role of family*. When asked what the role of family should be in the life of an assisted living resident, 34.1% of the participants felt family should provide emotional support. In addition, 29.5% felt family should be involved in every aspect of their life, 11.4% felt family should help with personal finances, and 6.8% felt the activities family engage in should depend on what the family member wants to do. Only 4.5% of participants felt family should handle medical decisions and 4.5% felt family should do nothing.

*Why family relationships are important*. When asked about the relationship with family, 27.7% of the participants stated family relationships make them happy, 23.4% said it was important to stay involved in family matters, 14.9% said family relationships made them feel cared for and not alone, 8.5% said it gave them pride to see their children as adults, 6.4% said it gave them a link to the outside world, and 6.4% said they felt sad when family members left. Only 4.3% of participants said family relationships made them feel safe and secure, 2.1% said they did not want to be a burden on their family, and 2.1% said family relationships provided them the ability to see youthful faces.

## **Supplementary Analysis**

**Quality vs. quantity.** Previous literature suggests the quantity of interaction with family and the quality of family relationships may not be mutually exclusive (Rotenberg & Hamel, 1988). In addition, Bengtson's (2001) definition of a tight-knit kin relationship incorporates both frequent contact and emotional support. Therefore, a supplementary analysis was performed to test the relationship between the frequency of visitations with a primary family caregiver and emotional bondedness between residents and family caregivers. Pearson's correlation coefficient revealed statistically significant positive associations between frequency of visitations and emotional bondedness (r = .365, p = .015).

Life satisfaction and depression. Three predictors of life satisfaction and depression were tested using a hierarchical multiple regression model. This multidimensional view included physical health, internal friendships, and family relationships as the three primary predictors of life satisfaction and depression for the current sample of assisted living residents. There is strong empirical evidence that these three variables are important contributors to well-being in an institutionalized older adult population.

Self-rated physical health has shown high positive correlations to life satisfaction and positive affect (Wiest, Schuz, Webster, & Wurm, 2011). In an assisted living population, self-rated health predicted both higher life satisfaction and lower depression (Park, 2009). Internal social relationships also play a major role in the quality of life of institutionalized elders. In an assisted living population, the number of reported friendships with other residents strongly predicted life satisfaction, quality of life, and "feels like home" measures (Street, Burge, Quadagno, & Barrett, 2007). As discussed earlier, family relationships have a strong impact on the life satisfaction and depression of assisted living residents. In this analysis, family relationships are defined as the emotional bondedness to a primary family caregiver when regressed with life satisfaction, and the emotional bondedness to and frequency of interactions with a primary family caregiver when regressed with depression.

First, each of the contributing factors was tested using Pearson's correlation coefficient. Higher scores of life satisfaction were significantly positively correlated with self-rated physical health (r = .264, p = .084), the number of friends in the facility (r = .320, p = .034), and emotional bondedness to a primary family caregiver (r = .344, p = .022).

Next, a hierarchical multiple regression analysis tested these three factors as predictors of life satisfaction. In the first step, life satisfaction was regressed on self-rated physical health ( $\beta = .264$ , SE = .791, t (42) =1.771, p = .084), explaining 6.9% of the overall variance. In step two, the number of friends in the facility was added to the model

 $(\beta = .296, SE = .629, t (41) = 2.053, p = .047)$  and explained an additional 8.7% of the variance in life satisfaction. Finally, emotional bondedness to family was added to the model ( $\beta = .287, SE = 21.822, t (40) = 2.047, p = .047$ ) and explained an additional 8% of the overall variance in life satisfaction. The complete analysis was statistically significant (*F* (3, 40) = 4.123, *p* = .012), explaining a total of 23.6% of the variance in life satisfaction (see table 7).

Lower scores of depression were significantly negatively correlated with the number of friends in the facility (r = -.369, p = .014), emotional bondedness to a primary family caregiver (r = -.477, p = .001), and frequency of contact with a primary family caregiver (r = -.312, p = .039). Self-rated physical health yielded a small, not statistically significant negative correlation (r = -.168, p = .276).

Next, a hierarchical multiple regression analysis tested these factors as predictors of depression. First, depression was regressed on self-rated physical health ( $\beta$  =-.168, *SE* =.190, *t* (42) =-1.105, *p* =.276), explaining 2.8% of the overall variance. In step two, the number of friends in the facility was added to the model ( $\beta$  =-.355, *SE* =.149, *t* (41) =-2.460, *p* =.018) and explained an additional 12.5% of the variance in depression. Finally, emotional bondedness to ( $\beta$  =-.351, *SE* =5.116, *t* (39) =-2.518, *p* =.016) and frequency of contact with family ( $\beta$  =-.209, *SE* =.026, *t* (39) =-1.516, *p* =.138) were added to the model and added an additional 21.9% of the total variance in depression. The complete analysis was statistically significant (*F* (4, 39) =5.769, *p* =.001), and explained 37.2% of the total variance in depression (see table 8).

**Emotional bondedness.** An additional analysis investigated specific activities that influence emotional bondedness to a primary family caregiver. Due to the high

frequency of families engaging in reminiscence (N = 35) and taking trips outside the facility (N = 38), the association between these two activities and emotional bondedness was tested. An independent sample t-test revealed families who reminisced showed significantly higher scores (t (42) = -1.985, p = .027,) of emotional bondedness (M = 32.86, SD = 3.36) than those who did not (M = 28.56, SD = 7.16) (See figure 1). This yielded a medium to large effect size (d = .716). An independent sample t-test revealed residents who left the facility with their primary family caregiver did not yield higher scores (t (42) = -.549, p = .293, d = .245) of emotional bondedness (M = 31.97, SD = 4.89) than those who did not (M = 32.00, SD = 2.90).

Due to the abundance of literature on the psychological benefits of reminiscence therapy (Goldwasser, Auerbach, & Harkins, 1987; Davis, 2004), additional tests were preformed to investigate the relationship between reminiscing and life satisfaction and depression. An independent sample t-test (t (42) =-1.130, p =.133, d =1.40) revealed residents who reminisced with family showed slightly higher scores of life satisfaction (M =47.71, SD =1.54) than those who did not (M =43.67, SD =3.78), however this effect was not statistically significant. In addition, an independent sample t-test (t (42) =1.264, p=.107, d =.518) revealed residents who reminisced with family showed slightly lower scores of depression (M =3.71, SD =2.36) than those who did not (M =4.78, SD =1.72), this effect was also not statistically significant.

#### Discussion

The current study found that the quality of family relationships better predicted assisted living residents' well-being than the frequency of family interactions. In addition, the number of activities families engage in during visitations with the purpose of providing socio-emotional support correlated with higher emotional bondedness between family and residents. Families who reminisced with their institutionalized relative showed higher scores of emotional bondedness, as well. Lastly, the current study investigated predictors of life satisfaction and depression including physical health, internal relationships, and family relationships. These factors are all important contributors to the well-being of institutionalized elders. Each of these findings are discussed in depth below.

#### **Quantity vs. Quality**

Conner et al. (1979) proposed that the quality or meaning of social interactions have greater consequences than the quantity of social interactions for well-being in older adults. Results from the current study confirm this claim. The quality of relationships with a primary family caregiver correlated with higher scores of life satisfaction and lower scores of depression in the current sample of assisted living residents. These results are similar to Snow & Crapo's (1982) study, which found greater emotional bondedness to family and friends correlated with higher scores of life satisfaction and subjective wellbeing in older adults. The current study replicated these findings in an assisted living population and targeted family members. In addition, the current study adds to Snow & Crapo's (1982) results by using a measure of geriatric depression. The interaction between the quality of family relationships and the quantity of contact with family was also investigated.

Higher frequencies of contact with family members correlated with lower scores of depression, but not higher scores of life satisfaction. However, the quality of these relationships yielded stronger correlations to both life satisfaction and depression. In addition, when the quality of family relationships and the quantity of family contact were tested as predictors of depression, the quality of relationships better predicted lower scores of depression in the current sample. These findings are similar to Beckman (1981), who reported that the perceived quality, not quantity of social interactions greater predicted well-being in older adults. The results of the current study indicate that the quality, more than the quantity of family interactions, promote high life satisfaction and low levels of depression in residents of assisted living facilities.

In support of this conclusion, qualitative analysis revealed residents showed a preference for the emotional support from family visitations more than frequent family contact. Residents also stated the most important role of family should be providing emotional support, more than financial help or medical decisions. Quantitative analysis suggests this emotional support is derived through the quality of family relationships and not the frequency of contact with family. These results are congruent with themes from Carstensen's socio-emotional selectivity theory, which states, as adults enter old age they engage in a strategic selection process to cultivate social networks that maximize emotional gains and minimize emotional risks (Carstensen, 1992). The author concludes that older adults living in assisted living facilities continue family ties for the emotional benefits, which improve their subjective well-being.

There has been much debate over what the role of family should be in the lives of institutionalized elders. Litwak's task specific theory proposed that staff should be responsible for specialized technical tasks, while family should be more involved in non-technical tasks (Dobrof & Litwak, 1977). Litwak does not specifically name socio-emotional support as a non-technical task, however, the current results suggest that

family members can contribute to care by bolstering a strong relationship and providing emotional support. Therefore, I offer an interpretation of the task specific theory, that staff should be primarily responsible for aiding with ADLs and other specialized healthcare tasks, while family should be responsible for providing emotional care through structured, relationship building interactions.

Given the positive impact of quality family interactions on residents' well-being, the current results have major implications for families, staff, and residents of long term care facilities. Regularly contacting institutionalized family members may not be enough to improve their well-being. Higher quality of family relationships correlated with greater perceived social support, higher life satisfaction, and lower scores of depression in the current sample. These results suggest that families may improve residents' well-being by learning techniques to sustain high quality relationships. Psychologists and social workers have developed programs for family members to improve the content of visitations (McCallion et al., 1999; Levy-Storms, 2011). These programs, however, previously targeted families of long term care residents with cognitive impairments. The current results suggest that even in a population where cognitive impairment is absent, improved family visits can impact residents' well-being. Future research should focus on developing family programs for higher functioning long term care residents.

A limitation of the current study is that it did not investigate the possibility of selective care. Previous research suggests that improving well-being through family visitations is optimized in residents that are in need of more social support (Gaugler et al., 2003; Weinberger et al., 1987). The current study failed to pair the need and receipt of residents' social support. Therefore, future research should investigate the possibility of a

selective care model by first assessing the needs of each resident and then investigating the psychological benefits of the quality and quantity of family interactions.

It is important to note this study used correlation statistics to test the relationship between life satisfaction and depression and the quantity and quality of family interactions. Correlational statistics show associations between variables, however these associations cannot be interpreted as a causal relationship. Therefore, despite the strong correlations between mental health measures and the quality of family relationships, the direction of a possible causal relationship is unclear, and it is possible an untested third variable is explaining these associations.

### **Emotional Bondedness**

Since the quality of family relationships are shown to have a stronger impact on assisted living residents' life satisfaction and depression than the frequency of family interactions, it is important to understand what factors contribute to producing greater emotional bondedness between residents and family members. The number of socioemotional support activities, intimate conversation topics, and assistance with ADLs/IADLs all correlated with higher emotional bondedness between residents and their primary family caregiver. These results suggest that the more activities a family member engages in may correlate with higher quality of family relationships. Therefore, proactive family members who engage in more activities during visits may improve the relationship with their institutionalized relative. This does not mean, however, that family members need to stay longer during their visits. In fact, the length of visits did not correlate with emotional bondedness between residents and family members. These

30

results indicate the need for structured intervention programs for families to maximize the number of care activities during each social interaction.

The number of socio-emotional support activities vielded the strongest correlation to emotional bondedness. An explanation of these results is that engaging in socio-emotional support activities is similar to providing invisible social support. Previous research suggests invisible social support is more beneficial than visible social support for improving well-being. Invisible social support is defined as support that the recipient is not aware he or she is receiving. Visible social support is defined as support the recipient knows he or she is receiving (Bradbury & Karney, 2010). Bolger, Zuckerman, & Kessler (2000) studied couples where one partner was preparing for the New York bar exam, and the other provided social support. In this sample, partners unaware of receiving support (i.e., invisible social support) showed a greater negative change in levels of depression than those aware of the support they were receiving (i.e., visible social support). It is important for family members to understand the types of activities they are engaging in during a visit. Family members should ensure that they engage in activities tailored to providing emotional support to improve the quality of the relationship with their institutionalized family member. Socio-emotional support activities were defined in the current study as non-practical tasks such as, going to restaurants, conversations about shared interests, watching TV, reminiscing and looking at photographs. The current results suggest that to improve the emotional bondedness between residents and family, structuring visits around socio-emotional support activities may be most beneficial.

31

When asked why residents look forward to family visits, the majority of responses were categorized as receiving emotional support. Only one resident mentioned looking forward to visits for help with personal items. In addition, staying appraised of family news, feeling cared for/not alone, and continuing reciprocal parent-child relationships were most often mentioned in describing what residents enjoyed most about family visitations. Qualitative analysis also revealed providing emotional support and the continuity of care is important for maintaining high well-being in long term care residents. Similar to themes from the activity theory of aging, which states the continuity of relationships and activities best predict satisfaction in old age (Havighurst, 1961), an emphasis on activities that are designed to create a bond between the family members and residents are not only beneficial to the quality of the relationship, but may also have an impact on residents' well-being.

These results have strong implications for family members trying to maximize emotional bondedness with their institutionalized relative through visitations. It is important for families to engage in a range of activities, although a strong emphasis should be placed on activities tailored specifically to providing emotional support. In addition, families should recognize they provide residents with the opportunity to continue relationships and activities prior to institutionalization. Therefore, when structuring a visit, family members should focus on emotional tasks that represent the nature of the relationship with their elderly family member prior to institutionalization.

There were no differences in scores of emotional bondedness between families whose primary means of visitations were face-to-face encounters or telephone calls. Interestingly, families whose primary means of contact were telephone conversations did engage in more intimate conversation topics. Intimate conversation topics were defined in the current study as discussions about fears of aging and mortality, reminiscing, talking about family issues, and discussing quality of care provided by the facility. This suggests that family members talking on the phone engage in socio-emotional support through different mechanisms than those using face-to-face visits. Due to the lack of ability to engage in physical activities, families using phone calls as their primary means of contact rely on conversation topics to show emotional support. Just as there is a need for structured family visitation programs to maximize the quality of family relationships, similar programs can be targeted to families who use telephone conversations as their primary means of contact.

Due to the high proportion of both women residents and caregivers, the current study was unable to test gender differences in the types of activities residents and caregivers engaged in. Future research should explore gender differences in the preference of care activities, as well as the types of activities families and residents engage in.

**Reminiscence.** An interesting result of the current study is that families who reminisced showed higher scores of emotional bondedness. There is a large body of literature on reminiscence therapy and its benefits for older adults. Butler (1980) concluded that as adults approach the final life stage, they begin to reminisce; he referred to this as "the life review". Older adults enjoy sharing their life story and autobiographies, and see reminiscence as a tool for better understanding the aging process (Gullette, 2003). Reminiscing also allows older adults to become more aware of important issues and view past events more positively (Lee & Sasser-Coen, 1996).

Reminiscence therapy is often implemented in group therapies for older adults. Goldwasser et al. (1987) reported levels of depression in participants of a reminiscence therapy group were significantly lower than control groups in a nursing home population. Similarly, elderly rehabilitation patients who completed a life review therapy group showed lower levels of depression and higher scores of life satisfaction compared to control groups (Davis, 2004). The current study suggests that the act of reminiscing has benefits to building a strong, emotional connection between family and residents of long term care facilities. Residents who reminisced with family did show higher scores of life satisfaction and lower scores of depression, however, these effects were small and insignificant. These results suggest that the positive impact of reminiscence therapy may be derived through emotional bondedness to a group, therapist, or peers. Future research is needed to test the mediating role emotional bondedness plays in the relationship between reminiscence therapy and subjective well-being in an older adult population.

#### **Predictors of Life Satisfaction and Depression**

The current study used a multidimensional view of factors of life satisfaction and depression for assisted living residents. The author targeted three distinct predictors of these mental health outcomes: physical health, internal relationships, and family relationships. The complete models were significant predictors of both life satisfaction and depression, suggesting that these three factors are important to improving well-being in long term care residents.

**Physical health.** Previous literature found higher scores of self-rated health predicted both higher life satisfaction and lower levels of depression (Park, 2009). The current study found that self-rated health was correlated with higher scores of life

satisfaction, however not with lower scores of depression. In addition, when predicting life satisfaction and depression, self-rated health explained only a small amount of overall variance in both variables.

These results may reflect a limitation of the current study, sampling bias. The current study was voluntary; therefore, residents choosing to participate may be those who perceived themselves as more healthy and active. The current sample had an average self-rated health of about 7.5 on a scale of 1-10, 1 being poor, 10 being strong. Because the current study did not use similar measures of self-rated health as previous research, it is unclear whether this is a representative sample. Another possible limitation related to self-rated health is that subjects were screened for cognitive impairment prior to participating in the study. There is a strong relationship between physical health and cognitive impairment. Older adults who were categorized as high in physical activity had lower risks of mild cognitive impairment, Alzheimer's disease, and all types of dementia (Laurin, Verreault, MacPherson, & Rockwood, 2001). Therefore, sampling bias may account for the small relationship between self-rated health and life satisfaction and depression in the current study.

While health cannot be ignored as a factor that contributes to well-being of institutionalized elders, the current results suggest that self-rated health may have less of an impact on well-being than other mechanisms such as internal and familial relationships.

**Internal relationships.** Street et al. (2007) reported relationships with other residents was one of the strongest predictors of life satisfaction and quality of life in an assisted living population. The current study found strong correlations between the

35

number of internal friendships and life satisfaction and depression. Furthermore, the number of friends in the facility was the greatest predictor of life satisfaction. Therefore, residents who are social and cultivate numerous relationships within long term care facilities show higher scores of life satisfaction and lower scores of depression. Previous literature has made similar conclusions about the importance of peer relationships in older adults. Peer relationships made at a local senior center correlated with increased mental health, physical health, and perceived emotional support in a sample of elderly women living alone in the community (Aday, Kehoe, & Farney, 2006). Street et al. (2007) suggest that the benefits of friendships are increased when unrelated individuals live together in long term care. Similarly, the current study shows that internal resident relationships are important for the well-being of long term care residents.

Previous research on internal peer relationships suggests that many long term care residents fail to cultivate friendships with other residents. On average, long term care residents named less than one friend living in their facility. In addition, 52% did not name any residents as a close friend (Wells & Macdonald, 1981). These findings make the current results relevant because internal relationships may be of great importance to residents' well-being, yet may be an aspect of life that is neglected by many long term care care residents.

A possible limitation associated with these results is that residents with low physical and cognitive functioning show less social engagement (Mor et al., 1995). The current sample of assisted living residents was comprised of high cognitive and physical functioning residents, which may make the current sample more likely to have large social networks. In fact, the current sample did show higher rates of internal friendships (M = 3.27, SD = 2.20) than previous findings (Wells & Macdonald, 1981). However, the number of internal friendships was only correlated with life satisfaction and depression, no correlations were found between participation in activities, self-rated physical health, or the frequency and quality of family interactions. This suggests that these factors are not confounding variables explaining the relationship between internal friendships and life satisfaction and depression. Therefore, future research should continue to focus on internal relationships as predictors of well-being in long term care.

**Family relationships-frequency.** Previous research found more frequent family interactions was the highest predictor of perceived social support and quality of life in a nursing home population (Tseng & Wang, 2001). While the current study suggests that the quality of family relationships have greater mental health benefits, the frequency of family interactions is important to creating a complete model of well-being in long term care. The frequency of family contact was only tested as a predictor of depression because of the significant correlation between these two variables. Frequency of family contact was not a significant predictor of depression when the quality of family relationships is a confounding variable explaining the correlation between the frequency of family contact and depression. Therefore, families with strong emotional bondedness to residents are likely to visit more often.

**Family relationships-quality.** As discussed earlier, the quality of relationships with a primary family caregiver yielded strong correlations to life satisfaction and depression. Quality of family relationships was a strong predictor of these two outcome measures in the proposed models. In addition, the quality of family relationships was the

strongest predictor of depression. However, the number of internal friendships was a stronger predictor of life satisfaction. These results suggest that while having a strong bond with family is important for well-being in long term care; because family members live in a different setting, this limits the amount of support they are able to provide. Litwak's tasks specific theory stated that the close proximity of staff make them more suitable to provide practical care (e.g., grooming, assistance, food) (Litwak et al., 1990). Applying this theory to emotional support, because of the close proximity of other residents, they may be of equal importance as family members to improving well-being through social interactions.

**Implications.** These proposed models of life satisfaction and depression have major implications for the well-being of residents living in long term care facilities. First, it is important for residents to maintain high levels of physical health. Second, internal resident relationships may have a major impact on well-being in long term care. It is important for staff to foster social interactions in long term care facilities. Activities, meal conversations, and other events sponsored by the facility are all outlets for residents to socialize. Third, the frequency of family contact does contribute to well-being. It is important that families maintain relationships after institutionalization. Contact with family provides residents a link to the outside world and continuity of activities and relationships. Lastly, the quality of family relationships is important to well-being. It is necessary for family members to understand that they provide emotional support for long term care residents. Therefore, family interactions should be centered on activities specific to providing socio-emotional care.

**Model limitations.** While the predictors tested in the proposed models cover three distinct aspects contributing to the well-being of long term care residents, it is not a complete model. Some additional factors that contribute to residents' well-being not discussed in the current study are quality of food, quality of relationships with other residents, perceived autonomy, and financial concerns (Street et al., 2007; Tseng & Wang, 2001, Park, 2009).

**Future research.** Future research should address the limitations of the current study by sampling a more representative population in long term care and creating a more complete model for life satisfaction and depression. Given the importance of internal peer relationships, future research should investigate the impact of the quality of resident relationships on long term care residents' well-being.

#### **Study Limitations**

As discussed earlier, a limitation of the current study is that the participants are a non-representative sample. Participants signed up for the current study on a volunteer basis. Therefore, it is possible that subjects who participated were those with frequent and meaningful contact with family, high scores of life satisfaction, and low scores of depression. In addition, participants were screened for cognitive impairment. About one third of assisted living residents have mild to severe cognitive impairment (Hawes, Rose, & Phillips, 1999), therefore, the current sample is not representative of this population. Also, the current sample was comprised of residents of private pay communities. The current study replicated previous findings that residents of private pay communities are highly educated and have consistent contact with family (Port et al., 2001). Different

demographics are found in nursing home residents; therefore, these results cannot be generalized for all residents of long term care facilities.

Another limitation of the current study is that it did not control for social desirability effects. Therefore, responses on both qualitative and quantitative measures may reflect idealistic responses from residents. Future research should address this issue by using statistical processes to control for responses that may reflect social desirability.

### Conclusion

In conclusion, the quality of family relationships are shown to have greater mental health benefits for assisted living residents than the frequency of contact with family. Families can promote strong relationships with residents by engaging in socio-emotional support activities during visitations. There may also be emotional benefits to reminiscing with institutionalized, elderly relatives. In addition, internal relationships may be of equal or greater importance as family relationships to the mental health of assisted living residents; however, future research on social networks in long term care is needed to test this claim.

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# Appendix A

Table 1

# Participant Demographic Information

	Range	M	SD	п	%
Age	78-103	89.59	5.31		
Sex					
Male				10	22.7
Female				34	77.3
Race					
White				42	95.5
Asian				2	4.5
Time in Assisted Living					
6 mo - 1yr				8	18.2
1-2 yrs				16	36.4
2+ yrs				20	45.5
Education					
Less Than High Schoo	ol			1	2.3
High School				9	20.5
Some College				10	22.7
College Degree				11	25
Masters or Higher				13	29.5
Contact with Family					
Per Month	.5-56	11.99	12.22		
Hours Per Month	0-38	10.90	10.05		
Self-Rated Health	4-10	7.45	1.81		
Number of Friends in					
Facility	0-8	3.27	2.20		
Hours in Activities/ wk	0-20	7.26	5.18		
Quality of Staff					
Relationships	5-10	8.79	1.19		

	n	%
Relationship		
Son	14	31.8
Daughter	24	54.5
Wife	1	2.3
Sister	1	2.3
Other	4	9.1
Frequency of Contact		
Daily	9	20.5
Weekly	27	61.4
Monthly	7	15.9
Yearly	1	2.3
Distance From Facility		
0-30 mins	20	45.5
30 mins - 1 hr	5	11.4
1-2 hrs	4	9.1
2+hrs	15	34.1

# Caregiver Demographic Information

Correlates of Life Satisfaction

	f
0.344	0.022*
0.135	0.383
	0.0

Correlates of Depression

	r	р
Emotional Bondedness to		
Family	-0.477	0.001**
Quantity of Visits	-0.312	.039*
<i>Note</i> : * <i>p</i> < .05. ** <i>p</i> < .01.		

Summary of Hierarchical Multiple Regression Analysis of Emotional Bondedness and	
Frequency of Family Contact as Predictors of Depression	

		Model	1		Model 2	
Variable	В	SE B	β	В	SE B	β
Contact with Family Emotional Bondedness to Family	058	.027	312*	029 -15.342	.027 5.329	159 419**
$R^2$ F for change in $R^2$			.097 .520*		.249 8.288**	k

*Note:* \**p* < .05. \*\**p* < .01.

Correlates of Emotional Bondedness

	r	р
Socio-Emotional Support	0.468	0.001**
ADLs/IADLs	0.354	0.019*
Intimate Conversation Topics	0.323	0.032*
Note: $*n < 05 **n < 01$		

*Note*: \**p* < .05. \*\**p* < .01.

Ν	Model 1			Model 2			Model 3	
В	SE B	β	В	SE B	β	В	SE B	β
1.400	.791	.264	1.239	.766	.233	1.026	.745	.193
			1.292	.629	.296*	1.177	.609	.270
						44.668	21.822	.287*
	.(	)69		.11	15		.17	9
	3.1	137		4.21	13*		4.19	0*
	В	1.400 .791	B SEB β	B         SE B         β         B           1.400         .791         .264         1.239           1.292         .069	B       SE B       β       B       SE B         1.400       .791       .264       1.239       .766         1.292       .629       .629       .11	B       SE B $\beta$ B       SE B $\beta$ 1.400       .791       .264       1.239       .766       .233         1.292       .629       .296*         .069       .115	B       SE B       β       B       SE B       β       B         1.400       .791       .264       1.239       .766       .233       1.026         1.400       .791       .264       1.239       .629       .296*       1.177         44.668         .069       .115	B       SE B $\beta$ B       SE B $\beta$ B       SE B         1.400       .791       .264       1.239       .766       .233       1.026       .745         1.400       .791       .264       1.239       .629       .296*       1.177       .609         44.668       21.822       .069       .115       .17

Table 7Summary of Hierarchical Multiple Regression Analysis of Variables Predicting LifeSatisfaction

		Model	1		Model	2	Ν	Iodel 3	
Variable	В	SE B	β	В	SE B	β	В	SE B	β
Self-Rated	210	.190	168	165	.181	132	112	.162	090
Health Resident Friendships Family Involvement- Quality Family Involvement- Quantity				366	.149	355*	346 -12.881 039	.133 5.116 .026	336* 351* 209
$R^2$			.028		.1	53		.372	
<i>F</i> for change in $R^2$ <i>Note:</i> * $p < .0$	<u> </u>	1	.220		6.0	)51*		6.784*	*

Table 8 Summary of Hierarchical Multiple Regression Analysis of Variables Predicting Depression

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

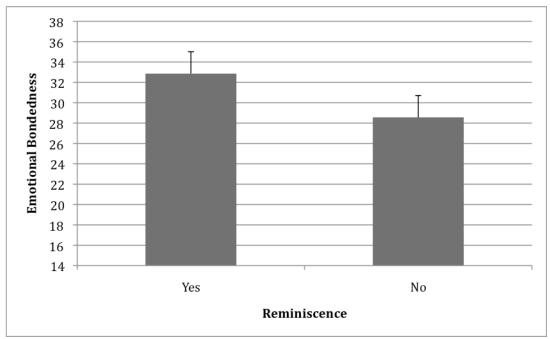


Figure 1: Families who reminisced showed higher scores of emotional bondedness.

### Appendix B

#### Snow (1980), Emotional Bondedness Scale

### Not at all true of her/him Somewhat true of her/him Very true of her/him

1.I can count on this person to stand by me.

2. Sometimes (he/she) makes me angry or upset.

3.Is sensitive to my feelings and moods.

4. Listens to my problems and worries.

5. Sometimes hurts my feelings.

6. Thinks highly of what I know and can do.

7. Sometimes makes me feel discouraged.

8.Often cheers me up.

9. We see eye to eye on most things.

10. We often have trouble getting along.

11. We really enjoy spending time together.

12. We get along better with each other when we keep our feelings to ourselves.

Zimet, Dahlem, Zimet, & Farley (1988), *Multidimensional Scale of Perceived Social* Support- Family Subscale (MSPSS)

Strongly Disagree		Neutral		Strongly Agree
1	2	3	4	5

- 1. My family really tries to help me
- 2. I get the emotional help and support I need from my family
- 3. I can talk about my problems with my family
- 4. My family is willing to help me make decisions

Strongly		Somewhat	Somewhat		Strongly
Disagree	Disagree	Disagree	Agree	Agree	Agree

Barrett & Murk (2006), Life Satisfaction Index A-Short Form (LSITA-SF)

1. As I grow older, things seem better than I thought they would be.

2. This is the dreariest time of my life.

3. I am just as happy as when I was younger.

4. I would enjoy my life more if it were not so dull.

5. My life could be happier than it is now.

6. The things I do are boring or monotonous.

7. I expect interesting and pleasant things to happen to me in the future.

8. The things I do are as interesting to me as they ever were.

9. My life is great.

10. Everything is just great.

11. As I look back on my life I am well satisfied.

12. I enjoy everything that I do.

Sheikh & Yesavage (1986), Geriatric Depression Scale-Short Version (GDS-S)

### Yes No

1.Are you basically satisfied with your life?
2.Have you dropped many of your activities and interests?
3.Do you feel that your life is empty?
4.Do you often get bored?
5.Are you in good spirits most of the time?
6.Are you afraid that something bad is going to happen to you?
7.Do you feel happy most of the time?
8.Do you often feel helpless?
9.Do you prefer to stay at home, rather than going out and doing things?
10.Do you feel that you have more problems with memory than most?
11.Do you think it is wonderful to be alive now?
12.Do you feel worthless the way you are now?

13.Do you feel full of energy?

14. Do you feel that your situation is hopeless?

15. Do you think that most people are better off than you are?

# *List of Activities Engaged in With Family* Activity:

1.Laundry (take home or do in facility)\*\*\*

2. Making Doctor Appointments\*\*\*

3. Accompanying to Doctors Appointments\*\*\*

4.Personal Finances\*\*\*

5. Cleaning the apartment\*\*\*

6.Grooming (hair, nails, etc.)\*\*\*

7.Bathing\*\*\*

8. Planning Events (birthdays, holidays, etc.)\*

9. Administrative Duties (Paying for Room, Heath Records, Family History, etc.)\*\*\*

10. Go To Movies\*

11. Go To Restaurant\*

- 12. Go To Festivals\*
- 13. Go To Theatre\*
- 14. Go To Concert\*
- 15. Go Shopping For Pleasure\*
- 16. Bring Groceries, Clothes, Drugs, Toiletries, etc.\*\*\*
- 17. Visit Family Home\*
- 18. Holiday Events\*
- 19. Family Dinners\*
- 20. Church or Other Religious Meetings\*
- 21. Car Rides\*
- 22. Walks\*
- 23. Play Cards\*
- 24. Creating Memory Books\*
- 25. Looking at Photographs\*
- 26. Watch TV\*
- 27. Eat Dinner Together in Facility\*
- 28. Participate in Activities Sponsored by Facility\*
- 29. Meet and Chat with Friends In Assisted Living\*

Discussion:

- 30. Reminiscing\*\*
- 31. Vent/Complain about care\*\*
- 32. Family Issues\*\*
- 33. Feelings of Guilt\*\*
- 34. Fears Associated with Aging\*\*
- 35. Fears Associated with Mortality\*\*
- 36. Current Events\*
- 37. Mutual Friends/Gossip\*
- 38. Generic Catching Up/ "What's New"\*
- 39. Humor\*
- 40. Shared Interests (Movies, Sports, TV, etc.)\*

\* Socio-emotional support \*\*Intimate conversation topics \*\*\* ADLs/IADLs

### Interview Questions

- 1. Do you prefer more practical or emotional oriented topics during a visit?
- 2. Is the frequency of visits or amount of emotional support derived from each visit more important for the relationship with your family?
- 3. Has the relationship with your primary visitor changed since moving to assisted living?
- 4. How do you feel after a visit emotionally?
- 5. How do you feel after a visit physically?
- 6. Do you look forward to visits from family members? Why?
- 7. What do you think the role of a family member should be in your life?
- 8. Do you think family visits have an impact on your well-being? Explain.