THE UTILITY OF SELECTIVE OPTIMIZATION WITH COMPENSATION FOR PROMOTING ADJUSTMENT AND WELL-BEING POST-ADMISSION TO ASSISTED LIVING AS A FUNCTION OF PERCEIVED DECISIONAL CONTROL

by

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ABSTRACT

The decision to transition to long-term care profoundly affects the lives of older adults, yet they often play a limited role in the decision-making process or are excluded altogether. This finding is alarming, as the adverse effects of low perceived control on adjustment to long-term care are well-documented. The present study examined the association of perceived decisional control with older adults' well-being and adjustment to an assisted living facility. These outcomes were then examined within the framework of the well-known and validated metamodel, Selective Optimization with Compensation (SOC; Baltes & Baltes, 1990). Specifically, the current study assessed whether or not the indirect effects (via perceived decisional control) of contributing factors to relocation on measures of adjustment and well-being were impacted when new assisted living residents focused their resources on whatever goals were deemed most important, realistic, and helpful in adapting to the environment. In a sample of 91 newly-transitioned assisted living residents in Maryland and Alabama, perceived decisional control was significantly associated with moving for reasons related to safety, caregiver burden, health, and capacity for independent living. Perceived decisional control partially mediated the effects of safety, caregiver burden, and health on acceptance; safety, caregiver burden, and health on negative affect; safety and caregiver burden on depression; and safety, caregiver burden, and health on socialization. Additional results partially support the moderating role of SOC strategies on the strength of indirect effects of several predictor variables on outcomes post-relocation. Overall, SOC adaptations appear to promote adjustment and well-being to relocation at various levels of perceived decisional control.

DEDICATION

To my parents, Drs. Darrel and Marilyn Regier, who have generously supported and encouraged all of my academic endeavors, and whose dedication to their respective fields and modeling of work-family balance inspires me daily.

To my husband, Greg, who has been my rock and constant source of inspiration, and whose humor and cheerleading were instrumental throughout the pursuit of my degree.

And to Dr. Marcia Marx, who initially fostered my love of geropsychology and continues to do so today.

LIST OF ABBREVIATIONS AND SYMBOLS

α	Cronbach's alpha is an index of internal consistency or reliability
β	Standardized beta coefficients, or the probability of Type II error
b	Unstandardized coefficients: the predicted change in Y given a one unit change of X
d	Cohen's measure of sample effect size for comparing two sample means
F	*F* distribution, Fisher's F ratio
M	Sample mean, arithmetic average
n	Sample size: the number of cases in a given sample
N	Total number of cases
p	Probability of obtaining a test statistic as extreme or more extreme than the observed
r	Pearson correlation: measures the linear relation between two variables
R^2	A measure of how well a regression line approximates real data points
SD	Standard deviation: an approximation of the average distance from the mean for a set of scores
Θ	Theta, or the population parameter
<	Less than
=	Equal to

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1. INTRODUCTION

Longer life expectancies and the rapid growth of the older population correspond with an increased likelihood of health problems or disability and a greater prevalence of age-related disorders. As the "baby boomer" generation began turning 65 in 2011, the number of older adults is expected to swell from 35.6 million in 2002 to 71.5 million by 2030 (Stotts & Deitrich, 2004). Furthermore, by 2050, the number of older adults with disabilities will reach approximately 21 million (U.S. Census Bureau, 2004). Currently, an estimated 12.1 million Americans need assistance from others to carry out activities of daily living (ADL), and approximately 30% of the older population with long-term care needs but are still living in the community have three or more ADL limitations (Henry J. Kaiser Foundation, 1999). The growing number of persons reaching old age and the increasing rate of disability that parallels age has placed long-term care (LTC) facilities in high demand. Prior to utilizing these formal LTC services, older adults often receive informal care in the form of an unpaid supportive role played by family members, friends, or community organizations (McCall, 2001). Over an extended period of time, however, older adults' needs often exceed the capacity of their informal caregivers, whereupon the employment of formal community services becomes necessary to continue to meet their care needs (Roberto, Allen, & Blieszner, 2001).

Long-term care is the set of health and social services delivered over a sustained period to persons who have lost (or never acquired) some capacity for personal care. Ideally LTC enables recipients to live with as much independence and dignity as possible (Kane, Kane, & Ladd, 1998). Although there are many different types of LTC options, some of the most commonly

used are skilled nursing facilities (SNF), assisted living facilities (ALF), and continuing care retirement communities (CCRC; Branch, 1987; Beulow & Fee, 2000; Wallace, Abel, Stefanowicz, & Pourat, 2007). Skilled nursing facilities, the most well-known type of LTC institutions, are residential facilities with nursing and other medical services that care for people with short-term recovery, end-of-life, or long-term chronic care needs (Wallace et al., 2007). There are approximately 1.7 million people residing in nursing homes in the United States, and approximately 22% of the population aged 85 and older spent some time in a SNF in 2006 (Centers for Disease Control, 2007). Continuing care retirement communities generally feature a combination of independent living and nursing care, and can also offer assisted living, memory support care, and other specialty care arrangements (American Association of Homes and Services for the Aging [AAHSA], 2010). Residents are also provided with 24-hour security, social and recreational activities, dining options, housekeeping, transportation, and wellness and fitness programs (AAHSA, 2010). At present, there are approximately 2,200 licensed CCRCs (Beulow & Fee, 2000).

Assisted living facilities, a less medicalized alternative to nursing homes, offer assistance to people who do not require round-the-clock nursing or medical care but do need some assistance with daily activities (Stone, 2007; Wallace et al., 2007). Nearly one million people reside in ALFs, which typically offer twenty-four hour staff for basic functional and medication assistance as needed, two to three meals per day, light housekeeping, social activities, and some transportation (Consumer Reports, 2005; Mollica, 2002). Roughly 26.3% of assisted living residents need help with two or more activities of daily living (Schafer, 1999), and many residents are cognitively impaired (Mezey, 2001). Using the Minimum Data Set – Cognition Scale, Zimmerman, Sloane, and Eckert (2001) found that 63% of the residents of smaller ALFs,

46% of the residents of traditional ALFs, and 52% of residents of larger, new-model ALFs have some degree of cognitive impairment (e.g., mild-moderate, severe, or very severe).

In spite of the fact that choosing whether or not to utilize LTC services has a profound effect on the lives of older adults, they often play a limited role in the decision-making process or are excluded from this process altogether (Reinardy, 2003). However, all legally competent older adults have the right to be active participants in decisions related to their care, and even individuals in mild to moderate stages of dementia have expressed a desire to be involved with treatment decisions (Hirschman et al., 2005; Miller, 2008). Building on this literature, the present study looked at how perceived control over the entire decision-making process is associated with well-being and adjustment to a new environment. These outcomes were then examined within the framework of a well-known and validated metamodel, Selective Optimization with Compensation (SOC; Baltes & Baltes, 1990). Specifically, the current study assessed whether or not relocation outcomes were positively impacted when new LTC residents focused their resources on whatever goals were deemed most important, realistic, and helpful in adapting to the environment.

The following review describes current research on the impact of general perceived decisional control on the well-being of older adults, common variables that contribute to relocation, perceived decisional control as it specifically relates to long-term care transitions, relocation trauma, and the history and utility of Selective Optimization with Compensation in long-term care and other settings. Furthermore, this study is unique in its identification and appreciation of quantitative outcomes and the qualitative data underlying and complementing these outcomes.

In summary, the current study is one of the first steps towards explicitly defining the influence of the SOC framework on perceived decisional control. Furthermore, this study examines the combined effects of SOC strategies and perceived control on the associations among factors that catalyze older adults' transitions to assisted living and how they fare in this new environment.

Background and Significance

Decisional Control. Empowerment and control over decisions are integral components of older adults' conception of autonomy (Funk, 2004). The majority of the literature on this topic finds that empowering and involving potential and current LTC residents in decision making has implications for physical and mental health and quality of care; however, the literature also finds that older adults are nonetheless frequently excluded. Somme, Thomas, de Stampa, Lahjibi-Paulet, and Saint-Jean (2008) asked 3,538 residents in 584 long-term care settings, "Who applied for your admission to this institution?" Only 38.1% of residents responded "myself," 40.6% cited family as making the decision, and 21.8% stated that a hospital or healthcare professional took part in the decision. Degree of participation had effects beyond the outcome of the decision, as resident involvement in the decision-making process influenced subsequent feelings about institutional life. This is consistent with earlier research, as Harel and Noelker (1982) found that perceived choice on entry affected satisfaction with treatment and life satisfaction, and Chenitz (1983) found that deciding and wanting to move to a LTC facility was related to patients' acceptance of the home and its services.

In another retrospective study, Reinardy (1992) examined assessment data on 502 newly admitted nursing home residents to determine associations between their participation in the decision to move and initial reactions to the home. Reactions were measured in the areas of

satisfaction with services, participation in activities, and social interaction. Results showed that 59% of respondents did not view themselves as having made the decision to move to the nursing home, and 36% said they "had not wanted to move at all." Respondents who felt they had made the decision were more inclined to feel positive toward the move (Reinardy, 1992). A later study by Reinardy and Kane (1999) explored the circumstances of the decision to move to a foster home rather than a nursing home through the retrospective perceptions of cognitively intact residents who had moved to each setting. The sample of 260 foster care residents and 179 nursing home residents were also asked about what they considered important in seeking a care setting, aspects of the decision-making process, and their sense of control over that decision. The authors found that perceived control was related to family influence for residents of both settings, such that persons more influenced by family members were less likely to feel in control of the decision. In the sample of nursing home residents, those with greater disabilities, less education, and little to look forward to participated less in activities. For foster care residents, lower education predicted greater satisfaction; this was the only demographic variable associated with perceived control (Reinardy & Kane, 1999).

More recently, Reinardy and Kane (2003) compared the decisions of persons who relocated to assisted living settings with those who entered nursing home facilities. The assisted living setting interviewees were 478 residents and 127 family respondents, whereas nursing home facility interviewees consisted of 171 residents and 439 family members. Results showed that more than 80% of nursing home residents perceived little or no control over the decision of whether or not to place in LTC. In terms of the choice between the two LTC settings, assisted living residents put the highest importance on controlling the ability to have visitors and on features of the apartment itself, while items regarding control of care were rated as less

important. Nursing home facility residents valued controlling visitors and care-related items. A qualitative study by Forbes and Hoffart (1998) looked at factors influencing decision-making regarding the use and nonuse of long-term care services, focusing on older adults' attitudes, values, and beliefs. The responses of the 27 participants were subjected to content analysis, and independence and sense of self were the strongest values to emerge. An attitude of acceptance, both passive and active, helped participants cope with increasing levels of dependency and lifestyle changes. It was evident from their responses that participants had a strong desire to be part of both major and minor decisions (Forbes & Hoffart, 1998).

Funk (2004) studied 100 older adults in Canadian long-term care facilities and found that individuals with higher education, a greater number of chronic conditions, and greater confidence in the value of their input preferred more active participation in decisions in the long-term care facility. Miller and Weinstein (2006) examined patient and provider predictors of perceived involvement in the admission decision and their relationship to both knowledge and preferences for continued care. Slightly more than half of the 205 participants reported a lot (42.1%) or a moderate (15.2%) level of involvement in the admission decision, while 27.9% reported no involvement. African Americans reported greater involvement in the decision, and individuals insured through Medicare or uninsured were more likely to be involved as compared to participants with private insurance. Forty-three percent of participants could identify their medical provider by name, 17.6% of participants indicated that they were unaware of another place where they might receive their care, and 27.5% were unaware as to what their expected length of stay in the nursing home was to be.

Interpersonal and intrapersonal factors leading to relocation. Health and medical issues, such as acute illness or injury and the need for rehabilitation, can often lead to involuntary

or unwanted relocation to LTC. Van Rensbergen and Nawrot (2010) investigated the medical reasons for nursing home admission in 2,023 residents and found that the main chronic medical conditions associated with admission were dementia and stroke. McNabey, Wolff, Semanick, Kasper, and Boult (2007) identified four chronic medical conditions that consistently lead to institutionalization: congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), diabetes mellitus, and Parkinson's disease.

The risk of involuntary nursing home placement can be greater when caregivers feel a high perceived level of burden. Caregiver burden is usually defined as the physical, psychological or emotional, and social and financial problems that can be experienced by family members caring for impaired older adults (George & Gwyther, 1986). In a study of 555 caregivers of Alzheimer's Disease patients, Aneshensel, Pearlin, and Shuler (1993) identified two main motivating factors to institutionalize: primary stressors, which are the demands and tasks of daily care (e.g., bathing, feeding), and secondary stressors, which are those that develop or intensify as caregiving continues (e.g., constriction of leisure activities, role captivity, problems in other relationships). Long-term care placement often represents an effort to alleviate these stressors. In addition, older adults themselves often want to avoid becoming burdensome, and one study found that the most frequent reasons for moving to a CCRC included the desire to not be dependent or a burden on anyone (Krout, Moen, Holmes, Oggins, & Bowen, 2002).

Although living alone is a risk factor for nursing home admission (Gaugler, Duval, Anderson, & Kane, 2007) and loneliness is a common outcome of institutionalization (Ice, 2002), it is possible that older adults may choose LTC in order to alleviate loneliness. Bekhet, Zauszniewski, and Nakhla (2009) identified loneliness and security/safety as "pushing factors" for older adults choosing whether or not to move into a retirement community. Loneliness is

prevalent among homebound and single older adults (Aebischer, 2008; Prieto-Flores, Forjaz, Fernandez-Mayoralas, Rojo-Perez, & Martinez-Martin, 2011), and the social activities offered by LTC facilities may be appealing to these individuals.

Perceived decisional control and relocation outcomes. The potential adverse effects of a low sense of decisional control on the well-being of older adults are well documented (Armer, 1996; Chenitz, 1993; Davidson & O'Connor, 1990; Forbes & Hoffart, 1998; Lundh, Sandberg, & Nolan, 2000; Thompson & Spacapan, 2010). Furthermore, perceived control prior to relocation to a long-term care facility can influence acceptance of and adjustment to the new environment (Chenitz, 1983; Iwasiw, Goldenberg, MacMaster, McCutcheon, & Bol, 1996).

It is well known that a loss of control or low degree of perceived control can have adverse effects on the well-being of older adults, such as depression or a threatened sense of self (Chenitz, 1993; Davidson & O'Connor, 1990; Forbes & Hoffart, 1998; Thompson & Spacapan, 2010). Positive outcomes associated with a sense of control include emotional well-being, successful coping with stress, good health, desired behavior changes, and improved performance (Thompson & Spacapan, 2010). Forced or medically necessary admission to LTC can result in stress relocation syndrome (SRS), which describes the physiological or psychological stress that occurs when a person is transferred from one environment to another (Wold, 2004).

Relocation trauma. Stress Relocation Syndrome, also referred to as "transfer trauma," encapsulates a set of negative outcomes that result from involuntarily moving an institutionalized patient from one environment to another (Hodgson, Freedman, Granger, & Erno, 2004). Sequelae of this trauma can include higher death rates, depression, reduced life satisfaction, disturbed behaviors, and immune-system indicators (Farhall, Trauer, Newton, & Cheung, 2003; Lieberman, 1974; Lutgendorf et al., 2001).

The literature on SRS was especially proliferative in the 1960s and 1970s, and several studies documented significantly increased mortality rates following relocation (Aldrich & Mendkof, 1963; Bourestom & Tars, 1974; Killian, 1970; Markson & Cumming, 1974). However, poor research design--e.g., the lack of a control group, small sample size, insufficient statistical power, and weak methodology--cast some doubt on early findings, particularly when subsequent studies found no mortality effects (Anthony, Proctor, Silverman, & Murphy, 1987; Borup, Gallego, & Heffernan, 1980; Davis, Thorson, & Copenhaver, 1990; Hodgson et al., 2004). Since the early relocation studies, there have been several waves and shifts in support for the association between relocation and adverse effects. In 1992, the term SRS and its diagnosis became official, defining SRS as physiologic and/or psychosocial disturbances as a result of transfer from one environment to another (Mallick & Whipple, 2000).

Thorson and Davis (2000) noted that "it is honest to conclude that change, and the threat of change, is disrupting to people who are near the end of their lives." Nonetheless, there are many factors that could influence the development of clinically significant transfer trauma, including degree of preparation prior to the move. Grant, Skinkle, and Lipps (1992) found that, when 196 persons who were already residing in nursing facilities participated in an inter-institutional relocation preparation program designed to enhance their sense of control and predictability over the move, outcome measures (medical records, nurses' ratings, interviews) indicated that the move had no negative effects.

Cognitively impaired older adults, such as persons with dementia, have also evinced signs of SRS, including increases in depression and mortality rates (Aneshensel, Pearlin, Levy-Storms, & Schuler, 2000; Thorson & Davies, 2000). Cohen-Mansfield (2002) reviewed literature on the rapid decline of patients with dementia after being institutionalized and

concluded that, although it is typically the frailest of older adults who are institutionalized, their mortality rate remains higher than expected as estimated by current statistical methods of controlling for disability. It can be a struggle to successfully reestablish a sense of place attachment after losing a home through relocation (Rowles & Watkins, 2003). A qualitative study by Lee, Woo, and Mackenzie (2002) found that newly-institutionalized older adults "adjusted through the stages of orienting, normalizing, rationalizing, and stabilizing as they struggled to regain normality with a life that was as close to that lived before admission as possible (p.667)."

Selective Optimization with Compensation. It is clear that adjusting to long-term care can be challenging for older adults, particularly if they were not active participants in the decision to relocate or if they were resistant to the move. Consequently, it is important to form an understanding of how the LTC resident can summon the resources to cope and adapt to this major life transition in order to age successfully. The metatheory of selective optimization with compensation (SOC; Baltes & Baltes, 1990) is a framework for understanding lifespan development whose tenets can be applied to LTC. The potential strength of SOC within an LTC setting is its ability to clarify the interaction between the individuals and their environment by emphasizing the multiple ways that a context can shape behavior as well as outcomes (Hyer & Intrieri, 2006).

Selection. A cornerstone of lifespan psychology is the notion that every stage of human development involves gains and losses, and successful development is the lifelong process of maximizing gains while minimizing losses (Baltes & Baltes, 1987; Baltes, 1997; Freund & Riediger, 2003). Gains can be conceptualized as desirable goals or outcomes, while losses can be thought of as undesirable states. According to the SOC framework (Baltes & Baltes, 1990), when

older adults are confronted with declining resources, they evaluate their existing goals and allocate their remaining resources toward those goals deemed most important and/or realistic. Conceptualized as *selection,* this involves strategically limiting or restricting one's repertoire of goals within a domain of activity in response to functional or environmental changes (Riediger, Li, & Lindenberger, 2006). The goals with which the individual moves forward should ideally be those that promote the best fit between personal needs or preferences, environmental, societal, or biological demands, and actual or acquirable resources (Weiner, Freedheim, Lerner, Easterbrooks, & Mistry, 2003).

Freund and Ebner (2005) categorized goals as *approach-oriented*, i.e., towards gains and growth, or *avoidant* of a given state. For example, an approach goal could be, "I want to seek higher education," whereas the avoidant counterpart might be, "I don't want to stop learning." A study by Rozario, Kidahashi, and DeRienzis (2006) found that participants' selection strategies were often activated as chronic conditions emerged or deteriorated or their social landscape was somehow altered. In such cases, the selection of goals can also provide a way for persons to exercise control in the context of losses over which they may have very little control. This type of selection is often termed *loss-based selection*, which involves modifying one's goals in response to losses in goal-relevant resources (Ebner, Freund, & Baltes, 2006). In contrast to adjustment-related processes, *elective selection* entails developing or committing to new goals aimed at achieving growth or higher levels of functioning (Ebner et al., 2006).

Optimization. Selection, though an essential first step toward the achievement of goals, does not go so far as to realize the chosen goals. The processes aimed at acquiring and refining the means-end resources and new skills in the pursuit of goals are known as *optimization* procedures (Baltes & Baltes, 1990). The new means that are acquired or orchestrated, or the

existing means that are enhanced, are influenced by variables such as the goal domain selected, demographic characteristics, and available support. An example of an optimization strategy is enrolling in online language classes to achieve the goal of learning a new language when attending formal training is not feasible.

The importance of optimization in old age cannot be overstated, as it facilitates the continuation of a meaningful, purpose-driven life and engagement in growth-related goals. The beneficial role of optimization in old age has been empirically supported by the Berlin Aging Study, in which older adults who utilized optimization strategies reported more positive emotions and greater satisfaction with aging (Baltes & Mayer, 1999). In a time of life when varying forms of loss are particularly prevalent, a focus on transcending limitations and sustaining goals will likely promote well-being.

Compensation. Compensation, the third leg of the SOC model, is the functional response to the loss of goal-relevant means (Boerner & Jopp, 2007) and can include acquiring or activating substitutive internal and external resources. The creative use of alternative means can enable individuals to reach their initial goals even in the face of limited or diminishing capacities, and typically involves the use of external means (Weiner et al., 2003). Baltes, Staudinger, and Lindenberger (1999) identified two major functional categories of compensation: (1) The procurement of novel means as compensatory strategies to reach the initial goal, and (2) enlisting the means to adjust developmental goals following the loss of goal-relevant means.

Marsiske and colleagues (1995) posit that there are three main causes of compensation, the first being the process of selection and optimization itself. Selection of goals and optimization of the means to meet those goals often necessitates the loss of means for the pursuit

of other desirable outcomes (Ericsson & Lehmann, 1996; Marsiske et al., 1995). The second main cause of compensatory situations is an environment-associated change in resources (Baltes et al., 1999; Marsiske et al., 1995). Transfer to a new and unfamiliar environment (e.g., a nursing facility) may involve a loss in environment-based means or may negatively affect the functioning of previously-acquired personal means (Baltes et al., 1999).

In contrast to optimization, which entails an approach towards desired outcomes or means, compensation is focused on the avoidance of negative outcomes and counteracting losses. Freund and Ebner (2005) believed that, with advancing age, goals shift from a predominant focus on optimization to a focus on compensating for an increase in losses and a decrease in gains. In order to test this hypothesis, Ebner, Freund, and Baltes (2006) conducted four studies of changes in goal orientations across adulthood. Results showed that younger adults reported a primary growth orientation in their goals, whereas older adults were more focused on maintenance and loss prevention. In older participants, orientation toward maintenance was positively associated with well-being, whereas there was a negative correlation for the younger participants. Ebner and colleagues (2006) identified this shift in goal orientations as an adaptive technique for coping with changing resources and constraints across adulthood.

The benefits of SOC. It is critical to well-being that older adults find ways to maintain their functional levels in the face of dwindling resources. Although optimal use of resources cannot prevent functional impairments when compensatory resources are limited, age-related decline in performance can be buffered by mobilizing additional means (Baltes & Lang, 1997; Marsiske et al., 1995; Rothermund & Brandstädter, 2003). With age, there are often losses in the context of social relationships, and the negative consequences of these losses can be reduced by enhancing or improving the quality of social resources (Rohr & Lang, 2009). The employment of

regulatory and accommodative behaviors can also counterbalance challenges associated with social contexts. For example, individuals may seek social contact (i.e., acquire new social resources) even if it means accepting increased dependency on and from others (Baltes, 1996; Dykstra, 1993; Rohr & Lang, 2009), thereby balancing the risks of isolation against the risks of interdependence.

When individuals select goals on the basis of available resources rather than searching for new ones, goal attainment and positive adaptation may be more likely (Jopp & Smith 2006). Indeed, Diener and Fujita (1995) found that congruence between accessible resources and goals predicted future well-being. In the older population, this concept may be particularly relevant for persons transitioning to a LTC setting, as the implementation of SOC strategies can be a protective shield against the emotional effects of an undesired LTC placement (Lang, Rieckmann, & Baltes, 2002; Rothermund & Brandtstädter, 2003; Staudinger, Freund, Linden, & Maas, 1999). Duke, Leventhal, Brownlee, and Leventhal (2002) followed 250 community-dwelling older adults longitudinally to examine activity loss and replacement following an important illness episode. In congruence with the SOC metamodel, older adults who replaced a lost activity experienced higher levels of positive affect one year after the illness episode as compared to those who did not replace activities.

The Current Study

It is apparent that the implementation of SOC strategies in response to increasing age and diminishing resources is often an integral component of successful aging. At present, however, little to no research has used the SOC framework to examine adjustment and well-being post-admission to long-term care as a function of perceived decisional control. This is unfortunate, as it is important to find empirical support for strategies that promote successful adaptation to LTC

even when decisional participation is low (as is often the case). The present study seeks to fill these conceptual and methodological gaps in the extant literature by identifying the utility of selective optimization with compensation for increasing adjustment and well-being at various levels of decisional control. Conceptually, it takes strides toward bridging the gap between existing studies on the impact of perceived control on well-being, the correlates of relocation "trauma," and the benefits of selection with optimization and compensation. Methodologically, the present study builds on the literature examining the role of decisional control as a mediator or independent variable and on those studies exploring the effects of SOC strategies on well-being. Research has not previously studied the influence of decisional control and SOC on one another and their combined effects on outcome measures related to the welfare of older adults.

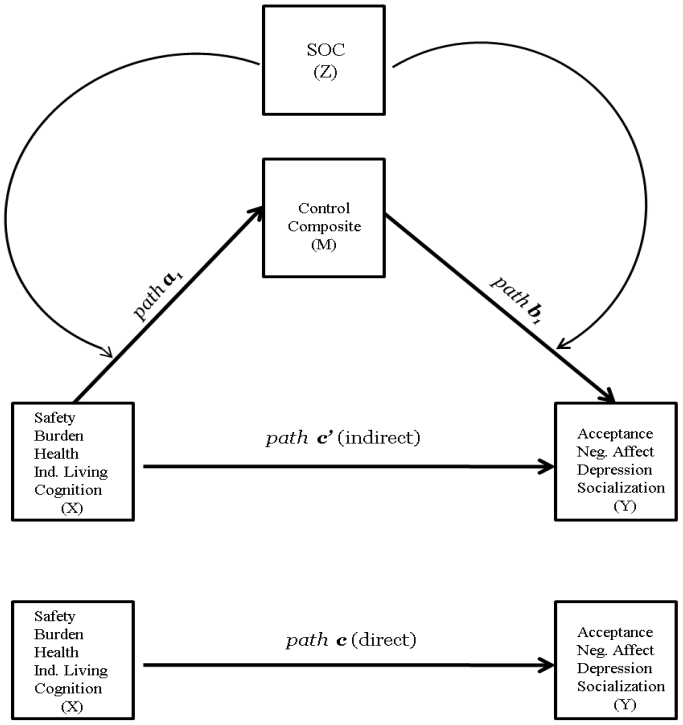
A graphical depiction of the variables of interest and the SOC strategies participants may or may not utilize can be seen in Figure 1. Although there are more factors that could potentially affect post-relocation adjustment and well-being, the hypotheses of the present study are based on the underlying assumption that these two outcomes are poorer when the perception of having had control over the relocation process, the perceived desirability of the move, and perceived involvement in the process as a whole are low. In other words, when an older adult does not feel he or she is not an active participant in the decision to relocate, does not want to relocate, or does not feel in control of the situation, his or her assimilation and emotional health may be worse as compared to persons who view themselves in the opposite way.

Specific aims

With these considerations in mind, and on the basis of the preceding discussion, the present study addressed three primary aims, each dealing with various aspects of older adults' adjustment to the move to an ALF:

Aim 1. The first primary aim was to evaluate the relationship of precipitating factors to relocation to 1) level of perceived decisional control, and 2) subsequent adjustment and well-

Figure 1. Proposed moderated mediation model.



being, as well as the relationships between perceived decisional control and adjustment and well-being. In order to address this aim, participants were administered assessments that collected information regarding: (a) reasons they may or may not have looked forward to the move, (b) their independence with regard to activities of daily living (ADL) and instrumental activities of daily living (IADL), (c) medical or health concerns prior to the move, (d) cognitive status, and (e) their desire to move, perceived involvement in the decision-making process, satisfaction with involvement, and how much they felt in control overall regarding the decision to move. Additional assessments addressed post-relocation outcomes, including (a) acceptance of the move, (b) negative affect, and (c) depressive symptomatology. The nurse or staff member who knew each participant best provided information regarding observed social engagement and

activity involvement within the assisted living facility. Using reviewed literature as a guide, the following preliminary hypotheses were made:

1. *Correlates of high perceived control/desirability/involvement:* It was hypothesized that individuals with comparatively higher levels of perceived control, perceived desirability of the move, and perceived involvement regarding the decision-making process would be more likely to have moved to decrease burden on their primary caregiver or the likelihood that they would be burdensome in the future, or for safety reasons. It was expected that these persons would also be less likely to have moved for health or medical reasons and would have higher cognitive status.
2. *Correlates of low perceived control/desirability/involvement:* The author hypothesized that individuals with comparatively lower levels of perceived control, perceived desirability of the move, and perceived involvement regarding the decision-making process would be more likely to have moved for health or medical reasons and would have a lower capacity for independent living (as measured by ADL and IADL performance). Additionally, it was expected that these participants would have lower cognitive status.
3. *Correlates of higher well-being:* Persons who moved for reasons related to safety and caregiver burden were expected to be more likely to exhibit greater acceptance of the new environment, lower negative affect, lower depressive symptomatology, and greater social engagement. Individuals who were identified as having high levels of perceived decisional control were expected to be more likely to assimilate and experience positive post-relocation outcomes, including lower depressive

symptomatology, lower negative affect, higher acceptance of the new environment, and greater participation in social activities.

4. *Correlates of lower well-being:* Persons who moved due to health concern, decreased capacity for independent living, and cognition were expected to be more likely to endorse lower acceptance, higher negative affect, greater depressive symptomatology, and lower social engagement.
5. *Relationship of perceived decisional control with outcomes:* Residents who were identified as having high levels of perceived decisional control were expected to be more likely to assimilate and experience positive post-relocation outcomes, including lower depressive symptomatology, lower negative affect, higher acceptance of the new environment, and greater participation in social activities.

Aim 2. The second aim was to examine whether or not perceived control mediated the relationship between factors precipitating relocation (i.e., safety, caregiver burden, health, capacity for independent living, cognition) and adjustment and well-being post-relocation (i.e., acceptance, negative affect, depression, socialization). In order to address this aim, a composite variable was created from those variables that specifically addressed perceived control, desirability, and involvement with regard to the decision-making process. This control composite was then entered into analyses as a potential mediating variable. Hypotheses related to this aim are:

6. Perceived control was expected to mediate the relationship between precipitating factors to relocation and adjustment/well-being post-relocation, such that: (a) precipitating factors to relocation would drive perceived control, (b) precipitating factors to relocation would be positively and significantly correlated with adjustment

and well-being, and (c) perceived control would be directly proportional to adjustment and well-being.

Aim 3. The third aim of the present study is to explore the effects of SOC-based strategies on adjustment and well-being post-relocation as a function of perceived decisional control. Qualitative information was collected during each interview and analyzed for themes according to grounded theory methodology (Strauss & Corbin, 1998). The qualitative piece was also assessed for the presence of selection, optimization, or compensation, and a categorical variable was created identifying the presence or absence of an SOC strategy in the participant's responses. This variable was entered into analyses as a moderator of the mediating control composite. The hypothesis related to this aim was:

7. SOC-based strategies would influence the degree of perceived control, such that the strength of indirect effects through control would depend on whether or not an SOC strategy was used.

2. METHOD

Study Design

This was a cross-sectional study of individuals who made the decision to relocate, examining those factors that can be identified as contributing to the move itself. An auxiliary and exploratory variable was cognitive decline (as measured by the Saint Louis University Mental Status exam [SLUMS; Tariq et al., 2006]) and its relation to level of actual and perceived involvement. As with any cross-sectional study, there is the possibility that certain outcome variables may have been a cause rather than an effect of level of decisional participation. While this potential limitation was recognized, this was an exploratory study to establish significant correlates of the decision shortly post-move; longitudinal work is necessary to establish causality.

Recruitment

Target participants for the current study were individuals who had relocated from independent residences in the community to assisted living and had been residing in that ALF for no more than one month. Assisted living facilities were chosen because of the greater likelihood of a range of perceived control and the presence of fewer rehabilitation and short-stay residents as compared to skilled nursing facilities.

Potential sites were initially contacted via an email to the administrator introducing the Principal Investigator (PI), briefly describing the purpose of the research project, and giving notice to expect a telephone call from the PI within one week. During an initial telephone contact, an in-person meeting was arranged to discuss the project in greater detail and to obtain a

written letter of support and consent to participate. The administrator then completed a Health Insurance Portability and Accountability Act (HIPAA) waiver in order to provide the PI with a list of relevant names. A letter for potential participants was placed in their mailboxes noting that the PI would be visiting to give a recruitment presentation. In-person presentations to the residents were chosen rather than telephone introductions because there may be residents who are unable to use the telephone, even with assistance (e.g., due to hearing impairment). Additionally, this was a helpful forum in which to answer questions and allow the residents to become familiar with the research staff. Scheduling of interview appointments took place following the recruitment presentation whenever possible.

Study recruitment took place in both Alabama and Maryland. These two geographic areas were selected to help increase both generalizability of the results and speed of the data collection. Furthermore, the PI had a strong pre-existing research relationship with many of the facilities in Maryland. The consenting facilities were: Ashton Gables (AL), Merrill Gardens (AL), Rittenhouse (AL), Danberry at Inverness (AL), Capstone Village (AL), Vantage House (MD), Lighthouse Senior Living (MD), and Springwell Senior Living (MD). Additional facilities in Maryland were interested, but did not house eligible participants during the data collection period of the current study.

Participants

Participants were 91 residents of ALFs in Alabama and Maryland. Mean age was 83.21 (*SD* = 7.06; range 68 – 98 years). The majority of participants were female (71.4%), White (96.7%), widowed (59.3%), and had a high school diploma/GED (22.7%). Performance of activities of daily living (ADL), as measured by the Katz Activities of Daily Living scale (Katz et al., 1963), averaged 1.58 (*SD* = 0.58; scale 1 = *independent* to 5 = *complete dependence*).

Performance of instrumental activities of daily living, assessed via the Lawton-Brody Instrumental Activities of Daily Living scale (Lawton & Brody, 1969), averaged 2.47 (*SD* = 0.94; scale 1 = *independent* to 4 = *complete dependence*). Participants had an average of 3.8 medical diagnoses. Additional demographic information can be found in Table 1.

Exclusion criteria were a length of residence in the ALF of greater than one month, age less than 60 years, absence of proxy consent for persons lacking decisional capacity, and a score on the cognitive screening tool, the SLUMS (Tariq et al., 2006), of less than 15.

Table 1. Demographic characteristics of study participants.

Sample Characteristics		SOC Strategy Utilization	
	Full Sample (*n* = 91)	SOC (*n* = 56)	No SOC (*n* = 35)
	M (*SD*) or % (*n*)	*M* (*SD*) or % (*n*)	*M* (*SD*) or % (*n*)
ALF location (% Maryland)	83.5%	80.4%	88.6%
Age	83.21 (7.06)	83.13 (6.46)	83.32 (8.02)
Gender (% Female)	71.4%	71.4%	71.4%
Race (% Caucasian)	96.7%	96.4%	97.1%
Marital status			
Widowed	59.3%	64.3%	51.4%
Married	27.5%	26.8%	28.6%
Divorced	7.7%	3.6%	14.3%
Single	5.5%	5.4%	5.7%
Education in years	13.71 (4.27)	13.89 (3.90)	13.43 (4.86)
Count of medical diagnoses	3.77 (2.10)	4.02 (2.23)	3.37 (1.83)
# ADL Tasks that Require Assistance	1.58 (0.58)	1.66 (0.60)	1.45 (0.52)
# IADL Tasks that Require Assistance	2.47 (0.94)	2.58 (0.93)	2.29 (0.94)

Note. ADL = Activity of daily living; IADL = Instrumental activity of daily living

Measures

Cognitive impairment. The SLUMS (Tariq et al., 2006) was administered to determine eligibility for the study and cognitive status was also as a (negative) predictor of perceived decisional control. The SLUMS consists of 11 items measuring various aspects of cognition, including orientation, short-term memory, calculations, animal naming, clock drawing, and recognition of geometric figures. Scores on this assessment range from zero to 30, and scores of

27-30 are considered normal in a person with a high school education, scores between 21 and 26 are suggestive of Mild Neurocognitive Disorder, and scores between zero and 20 are indicative of dementia. For individuals with less than a high school education, scores of 25-30 are considered normal, scores between 20 and 24 are suggestive of Mild Neurocognitive Disorder, and scores ranging from 1-19 signal the presence of dementia (Tariq et al., 2006).

Decisional capacity. Concurrent with informed consent, a decision-making capacity assessment tool recommended by the supporting institution's Internal Review Board (IRB) was used. This assessed four key elements of capacity: understanding (i.e., of the study and one's role in it), appreciation (i.e., of risks and benefits), reasoning (i.e., of alternatives), and expression of choice (i.e., voluntarily participating).

Control and satisfaction. As assessments measuring perceived decisional control, perceived involvement in the relocation process, and the perceived desirability of a relocation were scarce and not comprehensive enough to answer the research questions, this variable was measured by a questionnaire developed specifically for this study (Appendix A). The questionnaire also assessed such variables as the degree to which persons moved due to safety reasons, caregiver burden, and medical or health conditions. In case this new assessment was not sufficiently reliable, responses to the O'Connor Decisional Control Scale were also obtained (O'Connor, 1993), which measures participants' perceptions of certainty in decision-making. Test-retest reliability has been reported as 0.81 and internal consistency has ranged from 0.78 to 0.92 (O'Connor, 1995).

Self-reported capacity for independent living. The Lawton-Brody Instrumental Activities of Daily Living (IADL) scale assessed independent living skills (e.g., ability to use the phone or go shopping), which are considered more complex and sophisticated than basic

activities of daily living. The Katz Activities of Daily Living (ADL) scale (Katz et al., 1963) measured self-care activities that people normally do throughout daily life, such as bathing, dressing and undressing, toileting, transferring (e.g., from bed to chair), continence, and feeding. A composite variable of these two items was created and used in analyses as an indicator of capacity to function independently. Internal consistency was measured at 0.81.

Negative affect. The Philadelphia Geriatric Center Affect Rating Scale was used to rate perceived negative and positive affect. The scale contains 10 items that are coded for each respondent's average perceived frequency during the previous two weeks. Frequency, or strength of affect, is coded on a 5-point format, ranging from very slightly/not at all (coded as zero) to extremely (coded as 4). The present study focused on negative affect ($\alpha = 0.79$) as a marker for adjustment and well-being.

Depression. The Geriatric Depression Scale-Short Form (GDS-15; Sheikh & Yesavage, 1986) is a 15-item self-report scale tested and used extensively with older adults. Ten items indicate the presence of depression when endorsed, while five indicate the presence of depression when answered negatively. Scores of 0-4 are considered normal, while scores of 5-8 signify mild depression, 9-11 signify moderate depression, and 12-15 indicate severe depression (Kurlowicz & Greenberg, 2007). In the present study, the GDS-15 score ($\alpha = 0.80$) was used as a continuous rather than categorical variable.

Environmental involvement and sociability. Using an assessment developed for the purpose of this study, staff ratings and self-reported ratings were obtained regarding social integration, activity involvement, social withdrawal, and adjustment to the facility. Items for this assessment were taken from the affect subscale of the Multidimensional Observation Scale for

Elderly Subjects (MOSES; Helmes, 1988). Internal consistency for the present study was $\alpha = 0.87$.

Procedure

Interview appointments were scheduled after the recruitment presentation or through a follow-up telephone call. The interview took place at a location of the participant's choosing, usually either his or her apartment or a private room within the ALF. Participants completed an informed consent form; a repeat-back procedure was utilized during informed consent in order to ensure that respondents were able to comprehend the purpose of the study, appreciate the consequences, and understand they had an alternative to participation. A repeat-back technique involves asking participants to recount what they have been told in the informed consent discussion, and has been found to improve comprehension (Fink et al., 2010).

Concurrent with informed consent, a decision-making capacity assessment tool was used, and proxy informed consent was obtained for persons lacking decisional capacity. Once self or proxy consent was obtained, participants were administered the SLUMS (see Assessments for details). Participants who scored lower than 15 were informed that they had completed the necessary portions of the study, and that their help was valued and appreciated.

If a potential participant achieved a score on the SLUMS that was indicative of dementia (based on the aforementioned scoring system) but not lower than 15, the interviewer put the remainder of the interview on hold and asked the administrator to identify the participant's appropriate legally authorized representative (LAR). The interviewer contacted the LAR and requested proxy consent. The LARs were also assessed for competence, i.e., whether there were any mental or physical impediments to their decisional capacity. Interviewers determined how well the LAR understood the study, whether or not he or she could answer questions about it,

and whether or not he or she exhibited any nonverbal signs of confusion or dissent that did not abate after questions were answered.

Data Analysis

Preliminary analyses. Preliminary data analysis was conducted, including an examination of Cronbach's alpha for perceived control, perceived involvement, and perceived desirability. It was anticipated that these variables would be combined to form a single composite predictor (the "control composite"), and preliminary analyses provided support for the creation of this composite. Relevant items from the Perceived Decisional Control Scale (PDC) obtained a Cronbach's alpha of .849 for the current sample. The assumptions for normality (errors of prediction), linearity (linearity of the relation between dependent variable scores and the errors of prediction), homoscedasticity (variance of errors of prediction are approximately equal for all predicted dependent variable scores), reliability (variables are measured without error), and independence of residuals (errors of prediction are independent of one another) were tested initially and ensured to the greatest extent possible. Cronbach's alpha statistics were also calculated to ensure good internal consistency before use in statistical tests. This was particularly important for measures that were developed for use in the present study and had not been validated in prior research with older adults.

Qualitative analysis. In order to explore in-depth the various strategies a participant was or was not utilizing – and whether or not these aligned with the SOC model – it was necessary to freely ask questions throughout the interview procedure and to follow up on comments, asides, and answers of the participant. This free-flowing dialogue was examined and, if any strategies were identified, this qualitative data was plotted against the quantitative profile of the participant to see which strategies may be promoting better adjustment and well-being.

The analytic approach for the qualitative analysis was informed by the following principles of grounded theory methodology (Strauss & Corbin, 1998): (a) The data were transcribed and analyzed without a hypothesized framework in mind, and findings were viewed as ideas that would prove workable and helpful in making predictions and furthering understanding of the utility of SOC; (b) the PI aimed to develop theories and ideas based on the data that were grounded in localized accounts and experiences, i.e., the conclusions needed to be traceable to the data that gave rise to them. In order to accommodate potential contradictory data collected in future studies, conclusions based on the present data were not overly rigid; (c) conclusions were arrived at, first, through broad concepts and then, through increasingly specific categories; (d) the PI aimed to develop a general analytical framework with relevance extending beyond the research setting, and (e) to the fullest extent possible, the process of data analysis was kept open and transparent.

The PI and a co-investigator analyzed each participant's qualitative data individually. A list of all emerging themes across all participants' transcripts was compiled, and these were clustered into groups on the basis of similarity and overlap. The PI and co-investigator then worked together to further refine the emergent themes and identify the main themes and subthemes. Whenever possible, themes and subthemes were labeled using the participants' own words through selection of a representative quotation. The PI and co-investigator then revisited the qualitative data and independently recoded the transcripts according to the final list of themes and subthemes, and all relevant extracts were listed under each thematic heading. Rigor and transferability of data interpretation were ensured by having several researchers develop the coding scheme and finalize it through multiple iterations and discussions.

Quantitative analysis. Based on extensive literature review, the variables hypothesized to be precipitants of relocation to assisted living were: safety, removal of caregiver burden, the capacity for independent living, medical or health reasons, and cognition. Outcome variables that were representative of adjustment and well-being were acceptance of the new environment, affect, socialization as observed by staff, and depressive symptomatology. Perceived control was the hypothesized mediator between the predictors and outcomes of relocation.

The main effects of the five predictor variables and perceived control were examined using regression analyses. It was assumed that the predictor variables of safety and removal of burden would be related to greater perceived control (Aim 1, Hypothesis 1) and moving due to decreased capacity for independent living, medical or health reasons, and cognition would be related to lower perceived control (Aim 1, Hypothesis 2). Furthermore, it was expected that safety reasons for the move and desire to alleviate caregiver burden would be positively associated with adjustment and well-being, whereas moving due to decreased capacity for independent living, medical or health reasons, and cognition would have negative associations with measures of adjustment and well-being (Aim 1, Hypotheses 3 and 4). This model is shown in Figure 1. Furthermore, it was expected that the predictor variables would elicit various levels of perceived control (Path a), which would, in turn, lead to varying degrees of adjustment/well-being (Path c). Consequently, the relationships between precipitants of the move and the relocation outcome are mediated by perceived control over the move itself. As a result, the direct effects of the predictor variables on the outcomes are reduced (Path c').

Furthermore, it was anticipated that the use of an SOC strategy after the move would impact the strength of the mediating effect. Specifically, it was expected that the implementation of an SOC strategy would moderate the relationships between contributing factors to the move

and perceived control (Path az), and well as between perceived control and adjustment/well-being post-relocation. Both associations, and therefore also the total indirect path, should be stronger among persons who utilized SOC as compared to those who did not. Finally, it was assumed that SOC is positively associated with adjustment/well-being (Path z).

The main effects of precipitants of the move and SOC were examined using regression analyses in MPlus software (Muthen & Muthen, 2007). In order to test the moderated mediation effects, the framework outlined by Edwards and Lambert (2007) was used, which builds on the recommendations for testing mediation in a path analytic framework (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002) by combining these procedures with moderated regression analysis. Unlike two-step processes previously used, this framework allows for 1) simultaneous testing of the moderated mediation, 2) the separate estimation of first and second stage effects, and 3) direct, indirect, and total effects of the moderator variable (Patel, Kellermanns, & Eddleston, in press).

In recent years, the preferred treatment of the analysis of moderated mediation models has been to focus on the estimation of interactions between the moderator and the pathways that defined the indirect effect (Edwards & Lambert, 2007; Preacher, Rucker, & Hayes, 2007). Preacher, Rucker, and Hayes (2007) stress the estimation of the value of indirect effects conditioned on values of the moderator, which can be continuous or categorical (Hayes, 2009). In sum, moderated mediation occurs when the strength of an indirect effect (i.e., mediation relations) is contingent on the level of another variable, i.e., the moderator (Preacher et al., 2007). The present study assessed the strength of the indirect effects of perceived control when SOC strategies were and were not implemented. MPlus software version 17.1 (Muthen & Muthen, 2007) was used for all moderated mediation analyses.

A growing body of literature advocates for the use of bootstrapping to assess indirect effects (Bollen & Stine, 1990; Preacher et al., 2007; Shrout & Bolger, 2002). Bootstrapping is a resampling procedure that derives standard errors and constructs bias-corrected confidence intervals which allow for concluding whether or not the indirect effect of X on Y is significantly different from zero when tested as a simple bivariate association (Shrout & Bolger, 2002). Using bootstrapping, no assumptions about the shape of the sampling distribution of the statistic are necessary when conducting inferential tests (Preacher et al., 2007). In fact, bootstrap confidence intervals are preferred over the Sobel test because of the assumption the Sobel test makes about the shape of the sampling distribution of the indirect effect (Hayes, 2009, 2013; Preacher & Hayes, 2004, 2008, Scharkow and Hayes, in press).

With bootstrapping, the sample is treated as if it was the population, and random samples are drawn with replacement from the original sample. The bootstrap samples are then used to repeatedly estimate parameters, and these estimates help derive the sampling distributions of the parameters estimated from the original sample (Preacher et al., 2007). The number of resamples in the present study was set to 10,000 because, although bootstrapping leads to slightly different confidence intervals each time the method is applied to the same data, the variation due to random resampling diminishes as the number of resamples increases (Preacher et al., 2007). Bootstrapping also enables bias-corrected estimates of classification error rate, which is particularly useful with smaller samples. Although bias correction can increase variance, this trade-off results in a smaller mean-squared error (Jeske & Sampath, 2003).

3. RESULTS

Table 2 displays means, standard deviations, and intercorrelations for the study variables. Moving for safety reasons correlated positively with control (r = .27, p < .01), acceptance (r = .31, p < .01), and socialization (r = .35, p = .001). Moving to relieve or prevent caregiver burden was positively correlated with control (r = .52, p < .001), acceptance (r = .50, p < .001), and socialization (r = .48, p < .001), and was negatively correlated with depression (r = -.26, p < .05). Moving for health reasons was positively correlated with control (r = .24, p < .05), acceptance (r = .21, p < .05), and socialization (r = .23, p < .05). Moving due to capacity for independent living was positively correlated with depression (r = .21, p < .05), and was negatively correlated with control (r = -.21, p < .05). The outcome variables were all significantly correlated with one another as well as with control (Table 2). Raw associations among predictors and the mediator were preliminary to multivariate analyses specific to the study hypotheses. Based on these correlations, it was determined that, of potential covariates (i.e., age, sex, race, years of education, income, count of medical diagnoses, and ALF), only age bore a significant association with outcomes.

Aim 1.

The first aim was to evaluate the relationship between precipitating factors to relocation and 1) level of perceived decisional control, and 2) subsequent adjustment and well-being.

Hypothesis 1. It was assumed that safety and removal of burden would be related to greater perceived control. In order to test the proposed main effects of safety and burden, ordinary least squares regression analyses were conducted. Significant covariates were identified

(in this case, only age) and entered in the first step, and safety, burden, decreased capacity for independent living, medical or health concerns, and cognition were entered in the second step. As is appropriate for directional hypotheses, one-tailed tests were used. Supporting Hypothesis 1, moving for safety reasons was positively and significantly related to perceived control, $\beta = .37$, $p < .01$, as was moving for reasons related to caregiver burden, $\beta = .49$, $p < .001$, $R^2 = .53$, $F(6, 84) = 9.28$, $p < .001$ (Table 3).

Table 2. Descriptive statistics and correlations among the study variables.

	M	**SD**	1	2	3	4	5	6	7	8	9
1. Safety	1.93	1.14									
2. Burden	2.22	1.24	.32**								
3. Health	2.14	1.23	.42***	.18							
4. Indep.	2.02	0.66	.10	.001	.05						
5. Cognition	23.6	4.29	-.05	.001	.05	.11					
6. Acceptance	3.11	1.11	.31**	.50***	.21*	-.16	-.11				
7. Neg affect	1.70	0.94	-.15	-.14	-.20†	.09	-.01	-.31**			
8. Depression	2.75	1.96	-.21†	-.26*	-.16	.21*	-.11	-.57***	.44***		
9. Social	1.72	0.90	.35**	.48***	.23*	-.16	-.10	.81***	-.20†	-.46***	
10.Control	2.39	0.99	.27**	.52***	.24*	-.21*	-.07	.60***	-.36***	-.34***	.52***

$N = 91$

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; † $.10 > p > .05$

Table 3. Summary of OLS regression analysis predicting perceived decisional control.

	Perceived decisional control
	β
Age	**0.22****
Safety	**0.37****
Caregiver burden	**0.49*****
Medical/Health	**0.24***
Independence	**-0.19***
Cognition	-0.010
R^2	0.53
F(df)	9.28***(6,84)

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $.10 > p > .05$

Hypothesis 2. It was assumed that decreased capacity for independent living, medical or health concerns, and cognition would be related to lower perceived decisional control. The previously mentioned ordinary least squares regression analysis shows that Hypothesis 2 was partially supported, as perceived decisional control was negatively and significantly related to capacity for independent living, $\beta = -.19$, $p < .05$. However, there was an unexpected positive, significant correlation between perceived decisional control and moving for health or medical reasons, $\beta = .24$, $p < .05$. The relationship between cognition and perceived decisional control was nonsignificant, although in the predicted direction (Table 3).

Hypothesis 3. It was expected that the predictor variables of safety and burden would be positively associated with acceptance and socialization and negatively associated with negative affect and depressive symptomatology, while moving for health reasons, capacity for independent living and cognition would show the opposite pattern. An ordinary least squares regression analysis was conducted for each of the four outcome variables. Significant covariates were identified (again, only age) and entered in the first step, and safety, burden, decreased capacity for independent living, medical or health concerns, and cognition were entered in the second step (Table 4). In support of this hypothesis, the regression equation found that safety ($\beta = .31$, $p < .01$) and burden ($\beta = .50$, $p < .001$) were positively and significantly correlated with acceptance of the move, $R^2 = .28$, $F(1, 89) = 32.62$, $p < .01$. Safety ($\beta = .35$, $p = .001$) and burden ($\beta = .48$, $p < .001$) were also positively and significantly correlated with socialization after the move, $R^2 = .27$, $F(1, 89) = 29.19$, $p < .01$. Unexpectedly, health was positively and significantly correlated with acceptance ($\beta = .21$, $p < .05$) and socialization ($\beta = .23$, $p < .05$). Capacity for independent living was negatively associated with acceptance of the move, ($\beta = -.19$, $p < .05$),

and negatively and marginally associated with socialization after the move (β = -.18, p = .056). The equations for cognition were not significant.

Table 4. Summary of OLS regression analyses predicting adjustment and well-being post-move.

	Acceptance	**Neg. Affect**	**Depression**	**Socialization**
	β	β	β	β
Age	**0.17***	**-0.35****	**-0.22***	**0.16****
Safety	**0.31****	-0.14	-0.21†	**0.35*****
Caregiver burden	**0.50*****	**-0.23***	**-0.48***	**0.48*****
Medical/Health	**0.21***	-0.10	-0.07	**0.23***
Independence	**-0.19***	0.13	**0.24***	-0.18†
Cognition	-.010	-0.08	-0.11	-0.07
R^2	0.28	0.15	0.10	0.27
F (df)	33.62*** (6,84)	3.98* (6,84)	4.03* (6,84)	29.19** (6,84)

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $.10 > p > .05$

It was anticipated that individuals who were identified as having greater perceived decisional control would be more likely to assimilate and experience positive post-relocation outcomes, including lower depressive symptomatology, lower negative affect, higher acceptance of the new environment, and greater participation in social activities. This hypothesis was fully supported by the present study (Table 5), as ordinary least squares regressions found that perceived control was positively and significantly associated with acceptance (β = .60, $p < .001$) and social engagement (β = .52, $p < .001$), and was negatively and significantly associated with negative affect (β = -.36, $p < .001$) and depression (β = -.34, $p < .001$).

Hypothesis 4. Safety was negatively and marginally correlated with depressive symptomatology after the move, β = -.21, p = .051 (R^2 = .10, F(1, 89) = 4.03, p < .05) and was not significantly associated with negative affect (Table 4). As expected, there was a negative association between burden and negative affect, β = -.23, p < .05 (R^2 = .15, F(1, 89) = 3.98, p < .05), and burden and depressive symptomatology, β = -.48, p < .05. Moving for health reasons was not significantly correlated with negative affect or depressive symptomatology, although the relations were in the opposition direction than predicted. As expected, capacity for independent living was positively correlated with depressive symptomatology, β = .24, p < .05, although the relationship with negative affect was not significant. Cognition was not significantly correlated with any of the outcome variables.

Aim 2.

The second aim was to examine whether or not perceived control mediated the relationship between factors precipitating relocation and adjustment and well-being post-relocation.

Hypothesis 5. According to this hypothesis, perceived control mediates the relationship between precipitating factors to relocation (safety, caregiver burden, health, capacity for independent living, cognition) and adjustment/well-being post-relocation (acceptance, negative affect, depression, socialization). The results of relevant analyses are detailed below and organized by outcome variable.

Acceptance. For equations using acceptance as the outcome, there were significant indirect effects of safety (b = .09, p < .01, 95% CI: 04 to .14), caregiver burden (b = .15, p < .001, 95% CI: .10 to .20), and health (b = .06, p < .05, 95% CI: 02 to .11). For these three

significant indirect effects, the bias-corrected confidence intervals suggested partial mediation via perceived decisional control.

Table 5. Summary of OLS regression analyses predicting adjustment and well-being as a function of perceived decisional control

	Acceptance	**Neg. Affect**	**Depression**	**Socialization**
	β	β	β	β
Control	**0.60*****	**-0.36*****	**-0.34*****	**0.52*****
R^2	0.36	0.13	0.12	0.27
F (df)	49.62*** (1,89)	12.85*** (1,89)	11.66*** (1,89)	33.42** (1,89)

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $.10 > p > .05$

Negative affect. For equations using negative affect as the outcome, there were significant indirect effects of safety (b = -.043, p = .05, 95% CI: -.087 to -.014), caregiver burden (b = -.052, p < .05, 95% CI: -.094 to -.016), and health (b = -.036, p = .05, 95% CI: -.072 to -.013). For these three significant indirect effects, the bias-corrected confidence intervals were indicative of partial mediation via perceived decisional control.

Depression. For equations where depressive symptomatology was the outcome variable, there were significant indirect effects of safety (b = -.093, p < .05, 95% CI: -.19 to -.033) and caregiver burden (b = -.13, p < .01, 95% CI: -.22 to -.064). Bias-corrected confidence intervals for both of these indirect effects suggested partial mediation via perceived decisional control.

Socialization. Equations that utilized socialization as the outcome resulted in significant indirect effects of safety (b = .071, p < .01, 95% CI: .033 to .12), caregiver burden (b = .11, p < .001, 95% CI: .075 to .14), and health (b = .064, p < .05, 95% CI: .016 to .084). For these three significant indirect effects, the bias-corrected confidence intervals were indicative of partial mediation via perceived decisional control.

Aim 3. The third aim examined the effects of SOC-based strategies on adjustment and well-being post-relocation as a function of perceived decisional control.

Hypothesis 6. In order to examine the moderating effects of SOC, the paths for individuals who did and did not implement SOC-based strategies were examined. It was expected that moderated mediation would be implied when the strength of the indirect effect of predictor variables on outcomes through perceived decisional control was dependent on whether or not SOC strategies were used. Interpretation of the results will be organized by outcome variable.

Table 6. Simple effects on acceptance of the move depending on use of an SOC strategy.

	Stage		Effect		
	First	Second	Direct	Indirect	Total
SOC					
Safety	0.18	0.36***	0.13	0.065	0.19
Burden	0.38***	0.40***	0.30	0.15***	0.45***
Health	0.11	0.16*	0.037	0.018	0.055
Independence	-0.48†	0.36	-0.35	-0.17	-0.52
Cognition	-0.043	0.025	-0.002	-0.001	-0.003
NO SOC					
Safety	0.17	0.19†	0.065	0.032	0.097
Burden	0.33***	0.19*	0.13	0.063†	0.19†
Health	0.094	0.14	0.027	0.013	0.040
Independence	0.004	-0.014	0.00	0.00	0.00
Cognition	0.002	0.009	0.00	0.00	0.00

N = 91. All of the numbers are unstandardized coefficients (*b*s). The first stage corresponds to the relationship between the precipitating factors of the move and perceived control (Path a in Figure 1), whereas the second stage corresponds to the relationship between perceived control and acceptance of the move (Path b). The first and second stages together (a x b) represent the indirect (mediated) effect of the independent variables on acceptance, whereas the direct effect (Path c') represents the effect of the independent variables under the influence of the mediator (perceived control). Finally, the total effect is the sum of the direct and indirect effects (a x b + c').
Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $.10 > p > .05$

Acceptance. In mediation equations where acceptance was the outcome, regardless of whether an SOC strategy was used, the indirect effect of safety, health, capacity for independent living, and cognitive function was nonsignificant (Table 6). The indirect effect of caregiver burden was moderated by the use of SOC, as the mediation was significant for individuals in the SOC group ($b_{SOC} = .15$, $p < .001$) but only marginally significant for the non-SOC group ($b_{NO\ SOC}$

= .063, p = .068). In other words, acceptance after moving due to caregiver burden was more strongly related to perceived control for individuals who utilized SOC strategies as compared to those who did not.

Negative affect. In mediation equations where negative affect was the outcome, the indirect effects of safety, health, and cognitive function were nonsignificant for both SOC and non-SOC users (Table 7). The indirect effect of caregiver burden was marginally significant for the SOC group (b_{SOC} = -.049, p = .073) and nonsignificant for the non-SOC group, suggesting that the mediation was stronger when SOC strategies were used. The indirect of effect of capacity for independent living was marginally significant for the SOC group (b_{SOC} = .13, p = .077) and nonsignificant for the non-SOC group, indicating that the strength of the mediation was marginally greater when SOC strategies were used.

Table 7. Simple effects on negative affect after the move depending on use of an SOC strategy

	Stage		Effect		
	First	Second	Direct	Indirect	Total
SOC					
Safety	0.18	-0.19***	-0.067	-0.034	-0.10
Burden	0.38***	-0.13*	-0.096	-0.049†	-0.15†
Health	0.17	-0.16**	-0.055	-0.027	-0.082
Independence	-0.56**	-0.23*	0.25	0.13†	0.38
Cognition	-0.043	0.023	-0.002	-0.001	-0.003
NO SOC					
Safety	0.36**	-0.16	-0.12	-0.058	-0.17
Burden	0.47***	-0.13	0.24	-0.060	0.18
Health	0.25†	-0.19†	-0.095	-0.047	-0.14
Independence	-.025	-0.21	0.01	0.005	0.015
Cognition	0.002	-0.044	0.001	0.00	0.001

N = 91. All of the numbers are unstandardized coefficients (bs). The first stage corresponds to the relationship between the precipitating factors of the move and perceived control (Path a in Figure 1), whereas the second stage corresponds to the relationship between perceived control and negative affect after the move (Path b). The first and second stages together (a x b) represent the indirect (mediated) effect of the independent variables on negative affect, whereas the direct effect (Path c') represents the effect of the independent variables under the influence of the mediator (perceived control). Finally, the total effect is the sum of the direct and indirect effects (a x b + c').
Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $.10 > p > .05$.

Depression. In mediation equations where depression was the outcome, the indirect effects of safety, health, capacity for independent living, and cognitive function were nonsignificant for persons in both the SOC and non-SOC groups, and therefore were not moderated by SOC strategy implementation (Table 8). The indirect effect of caregiver burden was marginally significant for the SOC group (b_{SOC} = -.34, p = .081) and significant for the non-SOC group ($b_{NO\ SOC}$ = -.54, p < .05), suggesting that the strength of the mediation increased when SOC strategies were not utilized.

Table 8. Simple effects on depression after the move depending on use of an SOC strategy

	Stage		Effect		
	First	Second	Direct	Indirect	Total
SOC					
Safety	0.18	-.39**	-0.14	-0.070	-0.21
Burden	0.38***	-0.29*	-0.22	-0.11†	-0.33†
Health	0.17	-0.28†	-.093	-0.047	-0.14
Independence	-0.56***	2.11	-2.38	-1.19	-3.57
Cognition	-0.043	-0.085	-0.007	0.004	0.011
NO SOC					
Safety	0.36**	-0.41*	-0.29	-0.15	-0.44
Burden	0.47***	-0.38**	-0.36	-0.18*	-0.54*
Health	0.25†	-0.44*	-0.22	-0.11	-0.33
Independence	-0.025	-0.46†	0.023	0.011	0.034
Cognition	0.002	-0.90***	-0.003	-0.001	-0.004

N = 91. All of the numbers are unstandardized coefficients (*b*s). The first stage corresponds to the relationship between the precipitating factors of the move and perceived control (Path a in Figure 1), whereas the second stage corresponds to the relationship between perceived control and depression after the move (Path b). The first and second stages together (a x b) represent the indirect (mediated) effect of the independent variables on depression, whereas the direct effect (Path c') represents the effect of the independent variables under the influence of the mediator (perceived control). Finally, the total effect is the sum of the direct and indirect effects (a x b + c').
Note. *** p < .001; ** p < .01; * p < .05; † .10 > p > .05

Socialization. In mediation equations where socialization was the outcome, the indirect effect of cognitive function was nonsignificant for persons in both the SOC and non-SOC groups, and therefore was not moderated by SOC strategy implementation (Table 9). The indirect effect of safety was nonsignificant for the SOC group and significant for the non-SOC group ($b_{NO\ SOC}$ = .32, p < .05), indicating that the mediation was stronger when SOC strategies were not used. The indirect effect of caregiver burden was significant for both the SOC and non-

SOC groups (b_{SOC} = .31, p = .001; $b_{NO\ SOC}$ = .35, p < .001). These findings suggest that the strength of the indirect effect of caregiver burden on socialization via perceived control is not contingent on the use of an SOC strategy, as it does not significantly strengthen the mediation.

Table 9. Simple effects on socialization after the move depending on use of an SOC strategy

	Stage		Effect		
	First	Second	Direct	Indirect	Total
SOC					
Safety	0.18	0.29***	0.103	0.051	0.15
Burden	0.38***	0.27***	0.21	0.10***	0.31***
Health	0.13	0.078	0.020	0.010	0.030
Independence	-0.56**	0.39***	-0.44	-0.22*	-0.66*
Cognition	-0.031	-0.021	-0.001	-0.001	-0.002
NO SOC					
Safety	0.36**	0.29***	0.21	0.11*	0.32*
Burden	0.47***	0.25***	0.14	0.12***	0.35***
Health	0.25†	0.32***	0.16	0.081†	0.24†
Independence	-0.025	0.39***	-0.019	-0.01	-0.029
Cognition	0.015	-0.020	0.001	0.001	0.002

N = 91. All of the numbers are unstandardized coefficients (*b*s). The first stage corresponds to the relationship between the precipitating factors of the move and perceived control (Path a in Figure 1), whereas the second stage corresponds to the relationship between perceived control and socialization after the move (Path b). The first and second stages together (a x b) represent the indirect (mediated) effect of the independent variables on socialization, whereas the direct effect (Path c') represents the effect of the independent variables under the influence of the mediator (perceived control). Finally, the total effect is the sum of the direct and indirect effects (a x b + c').
Note. *** p < .001; ** p < .01; * p < .05; † .10 > p > .05.

The indirect effect of capacity for independent living was significant for the SOC group (b_{SOC} = -.66, p < .05) and nonsignificant for the non-SOC group, suggesting that the strength of the mediation increased when SOC strategies were implemented. The indirect effect of health was marginally significant for the SOC group (b_{SOC} = .24, p = .073) and nonsignificant for the non-SOC group, indicating that the strength of the indirect effect of health on socialization via perceived control is marginally continent on the use of an SOC strategy.

Qualitative analysis. It was determined that, of the 91 participants in the present study, 56 individuals (61.5%) endorsed an SOC-related strategy. *Selection* was implied when participants discussed strategically limiting the scope of their goals and focusing on the most important ones, often in response to physical, social, environmental, or economic changes.

Optimization strategies were those that enhanced a participant's resources to maximize his or her functioning within a selected domain (Baltes & Carstenson, 2003). The use of *compensatory* strategies was inferred when participants described efforts to meet goals through the acquisition or activation of new means, or behavioral and psychological strategies aimed at compensating for losses (Baltes & Carstensen, 1996).

The prevalence of themes and subthemes provided by the respondents are presented in Table 10 and described below. In addition, the percentage of individuals who used optimization strategies in support of the selected goals as well as the percentage of those who acquired or used alternative means (i.e., compensation) in pursuit of those goals is presented.

Table 10. The prevalence of themes and subthemes of selected goals

Selection	**Optimization (%)**	**Compensation (%)**
Relationships with others	20	0
Social	9.2	5.6
Family		
Health and wellness		
Physical health	15.4	22.2
Normalcy	15.4	5.6
Independence	12.3	44.4
Entertainment	12.3	33.3
Safety	3.1	0
Growth and meaning		
Purpose	36.9	0
Spirituality	10.8	5.6
Knowledge	4.6	22.2

$n = 56$.

Relationships with others. The most prevalent subtheme that suggested obtaining or strengthening existing resources to achieve goals related to Relationships was termed "*social*" and deals with social engagement. This subtheme captured such answers as "hiring a driving service to take me to bridge, church, and places to see my friends," and "it is too exhausting to go to all of the club meetings I used to, so I just go to the ones where I'll see my best friends." The subtheme of "*family*" incorporated such answers as "I wanted to be in an environment that

gave me more chances to see my grandkids, so I moved here" and "my children's peace of mind is my goal…so I moved here…my doctors are all close by too." Compensatory responses falling under the *family* subtheme included "I wanted to keep living with my wife but I needed extra help caring for her so we moved here" and "I can't see my family as much so I made a new family here."

Health and wellness. Numerous answers referred to subthemes that were captured by the theme of Health and Wellness. These subthemes were best defined as "*physical health,*" "*normalcy,*" "*independence,*" "*entertainment,*" and "*safety*." Optimization strategies within the subtheme of *physical health* were indicated by such responses as "My new way to exercise is by going to the dance class here" and "I work with the dietitian here to make sure I'm eating well" Examples of optimization under the *normalcy* heading were "I brought in all my old furniture and paintings to make my new apartment look as much like home as possible," and "I can't garden the way I did at my home so I find ways to plant my favorite flowers here, like asking for a plot outside and having a garden facsimile in my window." Responses suggestive of optimizing *independence* included "I still drive but only to the stores in the neighborhood in the daytime," and "I got my trainer to come in here so I can stay strong and not use one of those walkers." *Entertainment*-related optimization strategies were suggested by the following comments: "I was getting bored so I had my daughter bring in my old sewing machine," and "I missed going to concerts so I organized events here and brought in musical groups." Optimization tactics discussed that related to *safety* were, "I was worried about falling at home alone so I moved here to be surrounded by nurses" and "I knew I wasn't a good driver anymore so I moved here where all my needs are taken care of and I didn't need a car."

Compensatory strategies within the *physical health* subtheme included, "I can't exercise like I did before so I make up for that by eating healthy lunches and dinners here" and "It's harder to get exercise after my surgery so I'm doing the yoga they offer twice a week." An example of compensation under the *normalcy* heading was "I sold my car when I moved so I use the facility's bus to get to my regular hair cutter." *Independence*-related responses suggestive of compensation included "I got this rollator to help me get around," and "I use the free transportation services here so I can still go everywhere I did before." Compensatory tactics falling under the *entertainment* subtheme were "I bought an iPad to get books and play games in a new way" and "I can't woodwork anymore so I took up watercolor after one of the art classes here."

Growth and meaning. Many participants mentioned strategies that were related to striving for personal growth as well as a purposeful and meaningful life. Subthemes under the theme of Growth and Meaning were categorized as "*purpose*," "*spirituality*," and "*knowledge.*" Optimization strategies within the subtheme of *purpose* included "I can't teach English anymore so I have started writing a book," and "I moved away from my studios where I taught art so I started a knitting class here." Examples of optimization as it related to *spirituality* were "I'm maximizing my spiritual health here by starting to practice meditation and Buddhism," and "I miss my church so I started a Bible Study group." Responses suggestive of optimizing *knowledge* were "I bought a Kindle to continue to keep up with what is going on in the world and to read more" and "I go to the various classes offered here on Mondays and Wednesdays to keep learning."

Spirituality-related compensatory strategies included the following: "I listen to church services on the radio when there is no one to give me a ride." Examples of compensation under

the *knowledge* subtheme were "I make up for all the traveling I once did by having the world at my hands on my computer" and "I have poor vision so I've started listening to books and biographies on tape."

In the current sample, the effect of moving to relieve or prevent caregiver burden on acceptance of the move occurred indirectly (through perceived decisional control) only for respondents who implemented an SOC strategy. The strength of the indirect effect of caregiver burden on negative affect after the move via perceived decisional control was marginally dependent on the use of SOC. The significance of the indirect effect of moving due to capacity for independent living on socialization after the move was contingent on the implementation of an SOC strategy. The strength of the indirect effect of health on socialization via perceived control was marginally continent on the use of an SOC strategy. The indirect effect of caregiver burden on depressive symptomatology after the move was significant via perceived decisional control for individuals who did not implement an SOC strategy. Finally, the strength of the indirect effect of safety on socialization after the move via perceived decisional control was dependent on the absence of an SOC strategy.

4. DISCUSSION

The aging process is often marked by physical, social, and economic losses that necessitate adaptions on the part of the older adult for the maintenance of well-being. As such losses are frequently outside the realm of control, it may become increasingly important for older adults to exercise control over decisions related to such domains as circumstances, disposition, and health whenever possible. Previous research indicates that older adults' perception of control may be particularly crucial when transitioning to long-term care (Davidson & O'Connor, 1990; Lundh et al., 2000; Reinardy, 1992; Thompson & Spacapan, 2010). Bearing in mind the importance of perceived control and the changing physical, social, and economic landscapes that accompany aging, the present study applied Baltes and Baltes' (1990) SOC theory to the strategies older adults implement to minimize or circumvent the impact of age-associated loss. In addition, the influence of these strategies on the effects of degrees of perceived decisional control was examined.

The overall purpose of the study was to further explore the role of perceived decisional control in the relationships between common reasons for transitioning to LTC (i.e., maximizing safety, alleviating caregiver burden, health, capacity for independent living, and cognition) and indicators of adjustment/well-being (i.e., acceptance of the move, negative affect, depression, and social engagement) within the SOC framework.

The following hypotheses were proposed: (1) individuals with higher levels of perceived decisional control would be more likely to have moved to alleviate loneliness, to decrease burden on their primary caregiver or the likelihood that they would be burdensome in the future, or for

safety reasons. It was expected that these persons would also be less likely to have moved for health or medical reasons and would have higher cognitive status; (2) individuals with comparatively lower perceived decisional control (a composite variable of perceived control, perceived desirability of the move, and perceived involvement regarding the decision-making process) would be more likely to have moved for health or medical reasons, would have a lower capacity for independent living (as measured by ADL and IADL performance), and would have lower cognitive status; (3) participants identified as having greater perceived decisional control would be more likely to assimilate and experience positive post-relocation outcomes (e.g., lower depressive symptomatology, lower negative affect, higher acceptance of the new environment, and greater participation in social activities); (4) perceived decisional control would mediate the relationship between precipitating factors to relocation and adjustment/well-being post-relocation; and (5) SOC-based strategies would influence the degree of perceived control, such that the strength of indirect effects through control would depend on whether or not an SOC strategy was used.

The results of this study partially support the aforementioned hypotheses. Conclusions about the results are provided in the following section, which offers (a) a description of the findings organized by aim, (b) critical strengths and limitations of this study, and (c) a discussion of the overall implications and future directions of relevant research.

Aim 1. The relationships among precipitants to relocation, perceived decisional control, and adjustment and well-being post-relocation.

In support of the first hypothesis, moving for safety reasons was significantly associated with perceived control, such that participants for whom safety was a stronger catalyst of relocation endorsed higher perceived control over the move to assisted living. Additionally,

moving in order to alleviate caregiver burden or prevent future burden was significantly related to perceived control, as respondents who identified caregiver burden as a major reason for relocating perceived greater decisional control over the move itself.

The need or desire for a more safe and secure living environment is often intuitively linked with increased frailty – and therefore lower overall control. However, appropriate insight into their healthcare needs and functional deficits can actually enable older adults to initiate the move to long-term care. The results of the present study demonstrate that such initiative can bolster perceived control even while transitioning to an environment in which the older adult would presumably have less control. It is also possible that choosing to live in an assisted living facility that is naturally more secure and has help more readily available than community living can provide a sense of control over one's welfare. For example, one participant commented that, "My house was robbed twice during the past two years. I didn't move here for safety reasons in the sense that I thought I would fall and needed doctors nearby, I was just scared of living alone because it was becoming dangerous." While causation cannot be inferred, this study shows the potential for more actively taking responsibility for one's safety (in the broadest sense of the word) by moving to assisted living to lead to significantly greater perceived decisional control.

The majority of the literature on transitioning to long-term care as a consequence of caregiver burden deals with this relationship from the perspective of the caregiver (Aneshensel et al., 1993; del-Pino-Casado, Frías-Osuna, & Palomino-Moral, 2011; Gallagher et al., 2011; Gaugler, Mittelman, Hepburn, & Newcomer, 2009; Spitznagel, Tremont, Davis, & Foster, 2006). Research utilizing that perspective typically conceptualizes long-term care placement as a decision made by the family or caregiver of an older adult in an effort to relieve the increasing stress of caregiving responsibilities (Aneshensel et al., 1993). This oft-researched pathway to

long-term care placement naturally lends itself to a presumed lower degree of perceived decisional control on the part of the older adult.

The present study assessed the relationship between caregiver burden and transitioning to long-term care from the lesser-utilized perspective of the older adult, or care recipient. Similar to Krout et al. (2002), older respondents of this study often preemptively chose to move to assisted living in order to maximize independence or prevent future burden. Participants who independently made the decision to relocate well before the time when that decision was forced upon them (whether necessary or not) were better able to retain a sense of perceived decisional control as compared to participants who followed a different trajectory. Interestingly, several participants made comments along the lines of, "If I could do anything differently, I would have moved much sooner. My friends here who moved long ago did so without being influenced by their children." In other words, individuals who relocated before caregiver burden became an issue or at a time when their children were not concerned about them living alone were better able to conceptualize the move as solely their decision.

In partial support of the second hypothesis, perceived decisional control was significantly related to capacity for independent living such that persons who reported more ADL and IADL impairments endorsed lower perceived decisional control over the move to assisted living. Unexpectedly, the significant association between perceived decisional control and moving for health reasons indicated that, for this sample, participants who moved due to health concerns perceived a greater degree of control than those who did not. Finally, the relationship between cognition as a reason for the move and perceived decisional control was not significant, although the correlation was in the predicted direction.

Literature on the relationship between functional disability (herein referred to as capacity for independent living) and perceived control suggests that there is an interactive effect between the two constructs (Menec & Chipperfield, 1997). In the face of functional decline, it would conceptually make sense that an older adult might feel less in control of daily and long-term needs. While independent living is certainly feasible when individuals require minimum to moderate assistance with ADL or IADL performance, progressive reliance on assistance from others to executive these activities can decrease the safety of living alone (e.g., by increasing fall risk). When the move to a higher level of care becomes a necessary precaution rather than one of several possible options, the older adult in question could logically feel lower perceived control, as was the case in the current sample.

The finding that participants who moved due to health concerns perceived a greater degree of control than those who did not was not congruent with the extant literature (Gerstorf, Röcke, & Lachman 2010; Menec & Chipperfield, 1997). There are several possible explanations for this finding within the present sample. First, it is possible an aspect of functional disability mediated the relationship between health and perceived control. For example, van Rensbergen and Nawrot (2010) found that disease processes (e.g., stroke, diabetes, and mobility problems) were only significant precipitants of transitions to long-term nursing care if they caused functional disability. While the current study differs in that health was directly endorsed as a precipitant of relocation, it is possible that sense of control is more strongly related to the functional decline associated with a given health condition rather than the condition itself. The positive and significant relationship between health and perceived decisional control in the current sample may also be due to a conscious decision to relocate rather than rely on family for extensive assistance.

As previously mentioned, cognitive status was included as an auxiliary and exploratory variable out of necessity, as it was not possible to prospectively assess whether or not cognition led to relocation. As such, the potency of cognition as a predictor variable may be decreased. Regarding the nonsignificant finding of the relationship between cognition and perceived control, it is conceivable that cognition may act as a mediating variable rather than a predictor of the move. For example, Bye and Pushkar (2009) identified cognition as a mediator of the effects of perceived control on positive and negative affect in older adults facing retirement. In addition, the study protocol did not involve direct questions to the participants as to whether or not they felt cognition contributed to their move.

For those respondents who desired increased safety, it follows that they would be more accepting of the move due to expectations of greater security and accessibility of assistance being met. It is possible that persons who moved for safety reasons would engage in more social activities because the comfort of being in a more secure environment and not having to travel far to socialize would have a somewhat "freeing" effect. For example, one participant who endorsed safety as a reason for her move noted, "My house was in the country and I was pretty isolated, but it wasn't safe for me to drive anymore so I could never visit anyone. Here, all I have to do is walk out my front door to see people."

Persons for whom the relief or prevention of caregiver burden was paramount would be expected to have that goal met and would therefore be more accepting of the new environment. As one participant stated, "My kids don't have to worry about me at all anymore and that's the way it should be, so I am happy to be here." The reasons for the relationship between moving for reasons related to caregiver burden and socialization are less intuitive. However, it is possible that these participants were less active in the community for fear of causing their family or

caregivers stress, and may therefore welcome or take more advantage of social activities offered directly within the ALF. The significant relationship between moving for health reasons and acceptance could be the result of meeting the goal of having readily available healthcare assistance within or close to the assisted living facility. The majority of participating assisted living facilities had adjacent skilled nursing care or were in the neighborhood of a hospital center. Finally, the relationship between health and socialization could be due to individuals' making use of safer opportunities for socialization than were previously available to them at home.

As previously mentioned, the present study took the unique perspective of the older adult (care recipient) when assessing the relationships among caregiver burden, perceived decisional control, and the outcome variables. It was also noted previously that respondents who proactively chose to relocate prior the time when they had little to no choice were better able to retain a sense of perceived decisional control. With that in mind, it is not surprising that persons who moved because they did not want to be a burden (at present or in the future) exhibited lower depressive symptomatology. It is entirely possible that those individuals felt more empowered and less like their hand was forced when making the decision to move to assisted living, and were therefore better able to adjust.

The third part of hypothesis 3 was fully supported. It is well-documented that perceived decisional control has strong implications for adjustment to long-term care (Chenitz, 1983; Davidson & O'Connor, 1990; Iwasiw et al., 1996; Lundh et al., 2000; Reinardy, 1992; Thompson & Spacapan, 2010). In congruence with previous studies, perceived control influenced self-reported acceptance of the new environment for participants of the present study

as well as other measures of well-being in the directions predicted based on the extensive existing decisional control literature.

Aim 2. The mediating role of perceived decisional control.

It was postulated that perceived decisional control would mediate the association between factors contributing to relocation to assisted living and subsequent adjustment/well-being. While full mediation did not occur, partial mediation was confirmed in multiple instances. Although all mediations were only partial, these results nevertheless support previous findings that, regardless of the reasons driving the move to assisted living, the perception of decisional control is often a key predictor of how older adults will adjust following the move (Chenitz, 1983; Davidson & O'Connor, 1990; Iwasiw et al., 1996; Lundh et al., 2000; Reinardy, 1992; Thompson & Spacapan, 2010). The results also partially support the assumptions of the current study that specific circumstances prompting the move to assisted living can influence perceived decisional control, which in turn leads to varying degrees of adjustment and well-being.

Aim 3. The moderating role of SOC strategies on the mediation process.

Moderated mediation occurs when the strength of an indirect effect (i.e., mediation relations) depends on the level of another variable, i.e., the moderator (Preacher et al., 2007). In the present study, the proposed moderator was the SOC variable, which denoted the use of selection, optimization, or compensation. Moderation could occur at either the path between the predictors variables and perceived decisional control (first stage) or the path from perceived decisional control to the measures of adjustment/well-being (second stage), or the mediation process could be moderated by SOC strategies at both stages. Interpretation of the results will be organized by outcome variable.

Acceptance. In mediation equations where acceptance was the outcome, the indirect effect of safety was nonsignificant for both persons who did utilize SOC and those who did not, and therefore was not moderated by SOC strategy implementation (Table 3). The indirect effect of caregiver burden was moderated by the use of SOC, as the mediation was significant for individuals in the SOC group (b_{SOC} = .15, p < .001) but only marginally significant for the non-SOC group ($b_{NO\ SOC}$ = .063, p = .068). In other words, acceptance after moving due to caregiver burden was more strongly related to perceived control for individuals who utilized SOC strategies as compared to those who did not. Regardless of whether an SOC strategy was used, there were no indirect effects to moderate regardless between acceptance of the move and moving for safety reasons, moving for health reasons, capacity for independent living, and cognitive function.

Negative affect. In mediation equations where negative affect was the outcome, the indirect effect of safety was nonsignificant for persons in both the SOC and non-SOC groups, and therefore was not moderated by SOC strategy implementation (Table 4). The indirect effect of caregiver burden was marginally significant for the SOC group (b_{SOC} = -.049, p = .073) and nonsignificant for the non-SOC group. In other words, negative affect after moving due to caregiver burden was marginally more related to perceived control for individuals who utilized SOC strategies as compared to those who did not, providing partial support for the hypothesized mediational model of caregiver burden on negative affect when the SOC moderator was used.

The indirect of effect of capacity for independent living was marginally significant for the SOC group (b_{SOC} = .13, p = .077) and nonsignificant for the non-SOC group, indicating that negative affect after moving due to capacity for independent living was marginally more related to perceived control for individuals who utilized SOC strategies as compared to those who did

not. Therefore, partial support was shown for the hypothesized mediational model of capacity for independent living on negative affect when the SOC moderator was used. The indirect effects of health and cognitive function were nonsignificant for persons in both the SOC and non-SOC groups, and therefore were not moderated by SOC strategy implementation (Table 4).

Depression. In mediation equations where depressive symptomatology was the outcome, the indirect effects of safety, health, capacity for independent living, and cognitive function were nonsignificant for persons in both the SOC and non-SOC groups, and therefore were not moderated by SOC strategy implementation (Table 5). The indirect effect of caregiver burden was marginally significant for the SOC group (b_{SOC} = -.34, p = .081) and significant for the non-SOC group ($b_{NO\ SOC}$ = -.54, p < .05). In other words, depressive symptomatology after moving due to caregiver burden was more strongly related to perceived control for individuals who did not utilize SOC strategies as compared to those who did. These findings support the hypothesized mediational model of caregiver burden on depression when SOC strategies were not used.

Socialization. In mediation equations where socialization was the outcome, the indirect effect of cognitive function was nonsignificant for persons in both the SOC and non-SOC groups, and therefore was not moderated by SOC strategy implementation (Table 6). The indirect effect of safety was nonsignificant for the SOC group and significant for the non-SOC group ($b_{NO\ SOC}$ = .32, p < .05). In other words, socialization after moving due to safety was more strongly related to perceived control for individuals who did not utilize SOC strategies as compared to those who did. These findings support the hypothesized mediational model of caregiver burden on depression when SOC strategies were not used.

The indirect effect of caregiver burden was significant for both the SOC and non-SOC groups (b_{SOC} = .31, p = .001; $b_{NO\ SOC}$ = .35, p < .001). These findings suggest that the strength of the indirect effect of caregiver burden on socialization via perceived control is not contingent on the use (or non-use) of an SOC strategy. The indirect effect of capacity for independent living was significant for the SOC group (b_{SOC} = -.66, p < .05) and nonsignificant for the non-SOC group. In other words, social engagement after moving due to capacity for independent living was more strongly related to perceived control for individuals who utilized SOC strategies as compared to those who did not. The indirect effect of health was marginally significant for the SOC group (b_{SOC} = .24, p = .073) and nonsignificant for the non-SOC group, indicating that the strength of the indirect effect of health on socialization via perceived control is marginally continent on the use of an SOC strategy.

Qualitative outcomes.

More than half (61.5%) of the study participants endorsed an SOC-based strategy, which proved to be a significant moderator of several indirect effects via perceived decisional control.

Selection was implied when participants discussed strategically limiting the scope of their goals and focusing on the most important ones, often in response to physical, social, environmental, or economic changes. Goals or activities selected fell within the domains of relationships with others, (e.g., family or friends/acquaintances), health and wellness pursuits (e.g., goals specifically addressing physical health, maintenance of normalcy, maximization of independence, entertainment, and safety), and the pursuit of personal growth or a meaningful life (e.g., finding a purpose in life, spirituality, and knowledge acquisition).

Optimization strategies were those that enhanced a participant's resources to maximize his or her functioning within a selected domain (Baltes & Carstenson, 2003). These adaptations

were most commonly seen when participants discussed the desire to lead a purpose-driven life, maximize social engagement with close friends, improve or maintain physical health, and maintain a semblance of normalcy in the new assisted living environment.

The use of *compensatory* strategies was inferred when participants described efforts to meet goals through the acquisition or activation of new means, or behavioral and psychological strategies aimed at compensating for losses (Baltes & Carstensen, 1996). Such adaptations were mainly evident in discussions surrounding the maximization of independence, entertainment, the pursuit of knowledge, and physical health. Adaptations included the use of assistive devices or gadgets, and the modification or substitution of behaviors or activities.

Limitations

The present study is not without limitations. First, the sample size achieved (*n = 91*) was lower than the desired sample size of 109 participants (as per a power analysis). As a result, although these findings may reflect the true associations, mediational, and moderated mediational effects, the lower level of power produced by the sample size may have resulted in Type II errors, or the failure to detect an effect when one is present. The bias-corrected bootstrap method has, however, been found to protect against Type II error than other approaches at every level of sample size and effect size (MacKinnon, Lockwood, & Williams, 2004). The potential for Type I error in the current study should be acknowledged, as data simulation suggests that the bootstrap method is more susceptible to Type I error than some alternatives (MacKinnon et al., 2004) and self-report measures can result in inflated main effect correlations (Kang & Waller, 2005).

The study sample was very homogeneous, raising concerns about the generalizability of the results. However, research outlining the characteristics of assisted living residents has

identified the typical ALF resident as an 87-year-old widowed (or single) Caucasian female who is mobile but requires assistance with at least two ADLs and one IADL (Assisted Living Federation of America [ALFA], 2012). In the current study, the average participant was approximately 83 years old, widowed, Caucasian, and female. Consequently, it is conceivable that the results of this study have the potential for generalizability to other samples of assisted living residents, though the extent to which the findings are generalizable may be limited. While it would behoove future researchers to assess a more diverse sample of assisted living residents, current statistics show that minority older adults are more likely to move to nursing facilities and less likely to use assisted living (Howard et al., 2002).

A potential limitation of this study is the use of qualitative measures to identify the presence of SOC-based strategies. At least one other study has assessed SOC via a 48-item questionnaire with questions specifically addressing various forms of selection, optimization, and compensation (Freund & Baltes, 2002), whereas the current study protocol was informed by grounded theory methodology. Grounded theory has been criticized for being inductive in its analysis of data and therefore lacking in internal validity (Strauss & Corbin, 1998). However, the idea of "internal consistency" may be used instead (Strauss & Corbin, 1998), to ask "do all the parts of the theory fit with each other and do they appear to explain the data?" The coding process of grounded theory is systematic and described in great detail, and, unlike phenomenology or ethnography, emphasizes a very specific approach for coding the data (Lichtman, 2010). Furthermore, Urquhart (2000) notes that that lower-level categories identified during the open-coding phase tend to emerge relatively quickly, with higher level categories emerging much later through the integration of concepts. A hierarchical coding scheme discourages the reordering of concepts and tends to act as a disincentive to think radically about

reconceptualization of the core categories previously identified. In this study, the author and co-investigator who assisted with identifying themes and subthemes had substantial prior experience with grounded theory and ensured that the rigor of the method was upheld.

It is certainly possible, however, that open-ended self-report data could mean that participants will not recall all of the ways in which they adapted or implemented selection, optimization, or compensation. Future researchers may consider utilizing other methods such as checklists to overcome this limitation and subsequently apply a range of statistical techniques to more easily differentiate and identify SOC.

As several measures were developed or culled from existing measures for the express purpose of this study, psychometric properties of these instruments have not yet been thoroughly assessed. However, the findings do suggest the utility of a measure of perceived decisional control as it specifically relates to the transition to long-term care. It is the hope of this author that the perceived decisional control developed for this study will continue to be used and validated in future studies, as research consistently demonstrates the implications that perceived control has for adjustment to long-term care.

Strengths

To this author's knowledge, the present study is the first to apply the SOC framework to adjustment of older adults to assisted living as a function of perceived decisional control. This represents an essential contribution to the extant literature on adaptation to LTC, as it is important to find empirical support for those conditions under which SOC strategies promote successful adaptation to long-term care (even when perceived decisional control is low).This study also moves towards bridging the gap between existing studies on the impact of perceived

control on well-being, the correlates of relocation "trauma," and the benefits of selection with optimization and compensation.

Another advantage of the present study is the complementary analysis of both quantitative and qualitative data. Many of the studies examining the utility of selection, optimization, and compensation for older adults have been purely qualitative (Freund & Baltes, 2002; Rozario et al., 2011), conducted within the field of cognitive psychology (Ebner et al., 2006; Freund, 2006), or did not address adjustment to life transitions. In addition, although perceived control has long been known to affect acceptance of and adjustment to long-term care, this study examines its function as a mediator rather than a predictor variable. With regard to the importance of control as a buffer against distress, it is possible that individuals vary in terms of the amount of control necessary to avoid negative outcomes. Several studies have shown that, when the amount of perceived control is congruent with the desirability of control, negative effects are likely to be diminished (Rodin, 1986; Wolinsky & Stump, 1996). Analyses in the current study accounted for variations in the desirability of control by incorporating this variable into the composite variable used to represent overall perceived control.

The study is distinguished by implementing an approach that minimizes the disparity between prospective and retrospective feedback, whereas most studies in this area of research are far from prospective. The requirement that participants will have resided in assisted living for no more than one month permits a more accurate examination of those factors that directly contributed to relocation. While future research will ideally be longitudinal in nature to allow for prospective assessment of relationships among the study variables to an even more reliable degree, this research more closely approximated a prospective design than existing SOC studies. In addition, it is likely that the first few months of relocation are the most difficult for newly-

admitted residents, and identifying strategies and conditions associated with even a marginally better adjustment during this time will be beneficial for older adults.

Summary, Implications, and Conclusions

The frequent exclusion of older adults from deciding whether or not they should be placed in long-term care and overall minimization of their role in this decision is well-documented. Furthermore, there is evidence that having a low degree of perceived control regarding this process can have adverse affects on the well-being of older adults, such as depression, a threatened sense of self, decreased acceptance of the new environment, social withdrawal, and lower emotional well-being (Thompson & Scapacan, 2010). However, surprisingly little is known about how residents of an ALF, particularly those who were not active participants in the decision to relocate or were resistant to the move, can summon the resources to cope and adapt to this major life transition in order to age successfully. This study was designed with that gap in mind, and investigated how SOC strategies could diminish the impact of relocation-related losses and maximizes potential environmental gains. In doing so, these strategies can presumably act as a protective buffer against undesired relocation and increase the likelihood of positive adaptation to the ALF.

This study further clarified the associations among factors leading to relocation to assisted living and perceptions of control. Results indicate that, when older adults have appropriate insight into their healthcare needs and functional deficits, they may be more likely to initiate the move to an ALF and retain a greater sense of perceived decisional control. In addition, this study suggests that, when older adults anticipate and preempt future functional decline by moving to an ALF before their ability to live independently is compromised, they perceived a great sense of decisional control. However, when the transition to assisted living was

one of necessity rather than of choice, it logically followed that participants perceived less decisional control. The current data suggests that sense of control may be more strongly related to the functional decline associated with a given health condition rather than the condition itself. Data also suggests that older adults who relocate with specific goals and expectations in mind, such as maximizing safety, relieving or preventing caregiver burden, or minimizing distance to readily available healthcare may be more likely to be accepting of the assisted living environment and have fewer negative outcomes.

The current study also clarified the mediational role of perceived decisional control in the associations among factors contributing to relocation to assisted living and subsequent adjustment/well-being. The data indicates that perceived decisional control partially mediates the effects of moving for safety reasons, moving due to caregiver burden, and moving for health reasons on the outcomes of acceptance of the move, negative affect after the move, and social engagement after the move. Partial mediation of safety and caregiver burden on depressive symptomatology after the move also occurred. These findings support and expand on those of prior research, which suggest that the perception of decisional control is often a crucial component of the adjustment of older adults following the move to assisted living and other LTC facilities (Chenitz, 1983; Davidson & O'Connor, 1990; Iwasiw et al., 1996; Lundh et al., 2000; Reinardy, 1992; Thompson & Spacapan, 2010).

Finally, the results of the present study imply that the strength of indirect effects of reasons for relocation via perceived decisional control on adjustment and well-being is, at times, contingent on whether or not an SOC-based strategy is implemented. As previously mentioned, partial significant or marginally significant moderated mediation occurred in the following analyses: acceptance of the move when the driving factors behind the move were caregiver

burden, negative affect after the move when the move was catalyzed by caregiver burden or capacity for independent living, depressive symptomatology after the move when the move was prompted by caregiver burden, and social engagement post-move when relocation was due to safety, capacity for independent living, or health concerns.

The unique moderated mediation design utilized in the current study allowed for a more precise understanding of how precipitants to relocation, perceived decisional control, and relocation outcomes interact. Future research should examine the impact of other potential moderators and mediators of adjustment post-relocation, such as preparation for the move. For example, Grant et al. (1992) found that nursing home residents who had completed a "preparation program" designed to enhance their sense of control and predictability over the move did not experience adverse relocation effects.

Overall, the current study successfully expanded on existing literature and presented important novel findings. Looking forward, data from this study will be used to support the implementation of a longitudinal, prospective research protocol that will better explicate the relationships between precipitants of the move to assisted living (and other LTC settings) and post-move adjustment. Several steps would need to take place in order to execute such an ambitious research design, including the piloting of additional studies that use the perceived decisional control assessment developed for the current project. In addition, modifications would be made to the assessment of affect, such that objective measures were included in addition to the subjective, self-report measure. Conversely, the assessment of socialization would be modified to incorporate self-report measures.

Research has shown that population of assisted living facilities is fairly homogeneous at present (ALFA, 2012), and the current study sample was congruent with the average

demographics of assisted living. However, it would be behoove future studies to actively seek out more diverse assisted living settings in order to have a more culturally competent understanding of how the study variables interact.

The results of the present study may be useful for several reasons. First, when older adults are confronted with age-associated losses, it may be comforting to know that the adverse effects of these losses can be buffered by the use of SOC strategies. While the breadth of goals pursued is often decreased via SOC, this study indicates that it is still possible to engage in many meaningful activities and goal-directed behaviors through the use of creative means. Second, if older adults and their families have access to more detailed information regarding the experience of assisted living placement, they may be better emotionally prepared and more inclined to be proactive when faced with the decision of whether or not to move as well as how to optimize the timing of the move. Additionally, if older adults decide that long-term care is an option, they can take steps to alleviate risk factors for poor adjustment and adaptation to their future LTC facility.

The present study successfully demonstrated the utility of Selective Optimization with Compensation for promoting adjustment and well-being to assisted living under specific circumstances as a function of perceived decisional control. The important outcomes suggested by these data as well as the potential for learning even more about the relationships among study variables warrants appropriate modification of the study protocol and further investigation. As our "baby boomers" continue to age, the average lifespan (and therefore duration of caregiving) increases, and more individuals relocate to long-term care, it is imperative that older adults, family members, and healthcare providers have a comprehensive understanding of the factors and conditions that will be most conducive to successful aging and adjustment to long-term care.

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APPENDIX A

Measures

Saint Louis University Mental Status Examination

Perceived Decisional Control Scale

O'Connor Decisional Conflict Scale

Lawton-Brody Instrumental Activities of Daily Living Scale

Katz Activities of Daily Living Scale

Philadelphia Geriatric Center (PGC) Affect Rating Scale

Geriatric Depression Scale-Short Form

Multidimensional Observation Scale for Elderly Subjects

VAMC
SLUMS Examination

Questions about this assessment tool? E-mail aging@slu.edu.

Name _____ Age _____

Is patient alert? _____ Level of education _____

__/1 (1) **1. What day of the week is it?**

__/1 (1) **2. What is the year?**

__/1 (1) **3. What state are we in?**

4. Please remember these five objects. I will ask you what they are later.

Apple Pen Tie House Car

5. You have $100 and you go to the store and buy a dozen apples for $3 and a tricycle for $20.

(1) **How much did you spend?**

__/3 (2) **How much do you have left?**

6. Please name as many animals as you can in one minute.

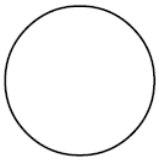
__/3 (0) 0-4 animals (1) 5-9 animals (2) 10-14 animals (3) 15+ animals

__/5 **7. What were the five objects I asked you to remember?** 1 point for each one correct.

8. I am going to give you a series of numbers and I would like you to give them to me backwards. For example, if I say 42, you would say 24.

__/2 (0) 87 (1) 649 (1) 8537

9. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o'clock.



(2) Hour markers okay

__/4 (2) Time correct

__/2 (1) **10. Please place an X in the triangle.**

(1) **Which of the above figures is largest?**

11. I am going to tell you a story. Please listen carefully because afterwards, I'm going to ask you some questions about it.

Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.

__/8 (2) **What was the female's name?** (2) **What work did she do?**

(2) **When did she go back to work?** (2) **What state did she live in?**

_____ **TOTAL SCORE**

Department of Veterans Affairs

SAINT LOUIS UNIVERSITY

Scoring		
High School Education		Less than High School Education
27-30	Normal	25-30
21-26	MNCD*	20-24
1-20	Dementia	1-19

* Mild Neurocognitive Disorder

SH Tariq, N Tumosa, JT Chibnall, HM Perry III, and JE Morley. The Saint Louis University Mental Status (SLUMS) Examination for Detecting Mild Cognitive Impairment and Dementia is more sensitive than the Mini-Mental Status Examination (MMSE) - A pilot study. J am Geriatri Psych (in press).

Perceived Decisional Control Scale

(regarding the move to long-term care)

1) How much did you want to move?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Very much	Wholeheartedly	

2) To what extent were you involved in making the decision to move and choosing where you went?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Very much	Wholeheartedly	

3) How satisfied were you with your level of involvement in this decision?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Very	Completely	

4) Circle the choice that best describes the way you feel about your level of involvement:

0	1	2	3	4	(Please circle)
No comment	Not at all as involved as desired	Somewhat involved, but not enough	Almost as involved as I wanted to be	Involved exactly the right amount	

5) Overall, how much say did you have and how in control were you over the situation?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Very	Completely	

6) How desirable did you find the possibility of relocating? In other words, how appealing was the move?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Very much	Extremely	

7) How much did you agree with the final decision to relocate?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Mostly	Completely	

8) Did you look forward to the move because you desired increased safety?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Mostly	Completely	

9) Did you look forward to the move because you desired to unburden family members or prevent future caregiver burden?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Mostly	Completely	

10) Did you look forward to the move because you were lonely or desired increased opportunities for socialization?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Mostly	Completely	

11) Was there any particular health event that led to your move?

0	1	2	3	4	(Please circle)
Unsure	Health was not a factor not a main	Health was not ideal but factor greatly	Health contributed event	Yes, there was a clear and specific health	

12) If yes, describe the health event or medical circumstances that contributed to your move

_____

13) Are you comfortable with and accepting of the outcome of the move?

0	1	2	3	4	(Please circle)
Unsure	Not at all	Somewhat	Mostly	Completely	

14) Ideally, what would your living situation be? _____

15) What kinds of emotions are you feeling regarding this whole process?

_____

O’Connor Decisional Conflict Scale

	Strongly Agree [0]	**Agree** [1]	**Neither Agree Or Disagree** [2]	**Disagree** [3]	**Strongly Disagree** [4]
1. I know which options are available to me.					
2. I know the benefits of each option.					
3. I know the risks and side effects of each option.					
4. I am clear about which benefits matter most to me.					
5. I am clear about which risks and side effects matter most.					
6. I am clear about which is more important to me (the benefits or the risks and side effects).					
7. I have enough support from others to make a choice.					
8. I am choosing without pressure from others.					
9. I have enough advice to make a choice.					
10. I am clear about the best choice for me.					
11. I feel sure about what to choose.					
12. This decision is easy for me to make.					
13. I feel I have made an informed choice.					
14. My decision shows what is important to me.					
15. I expect to stick with my decision.					
16. I am satisfied with my decision.					

Lawton-Brody Instrumental Activities of Daily Living Scale (IADL)

Please rate your ability to perform the following *home management tasks* DURING THE PAST TWO WEEKS (if someone does home management tasks for you, please rate their ability even if he/she is not required to do tasks):

(1) Ability to use the telephone:

1 – Operate telephone on my own initiative (look up and dial numbers, etc.)
2 – Dial a few well-known numbers
3 – Answer telephone but do not dial
4 – Do not use telephone at all

(2) Ability to go shopping:

1 – Take care of all my shopping needs independently
2 – Shop independently for small purchases
3 – Need to be accompanied on any shopping trip
4 – Completely unable to shop

(3) Ability to prepare meals:

1 – I plan, prepare, and serve adequate meals independently
2 – Prepare adequate meals if supplied with ingredients
3 – Heat and serve prepared meals, or prepare meals but do not maintain adequate diet
4 – Need to have meals prepared and served

(4) Ability to perform housekeeping tasks:

1 – I maintain the house alone, or with occasional assistance (e.g., heavy work, domestic help)
2 – Perform light daily tasks such as dishwashing and bedmaking
3 – Perform light daily tasks but cannot maintain acceptable level of cleanliness
4 – Need help with all home maintenance tasks
5 – Do not participate in any housekeeping tasks

(5) Ability to do laundry:

1 – I do all personal laundry independently
2 – Launder small items, e.g., rinse socks, stockings, etc.
3 – All laundry must be done by others

(6) Modes of transportation:

1 – I travel independently on public transportation or drive my own car
2 – Arrange travel via taxi, but do not otherwise use public transportation
3 – Travel on public transportation when assisted or accompanied by another
4 – Travel limited to taxi or automobile with assistance of another

(7) Responsibility for own medications:

1 – I am responsible for taking medication in correct dosages at the correct time
2 – Take responsibility if medication is prepared in advance in separate dosages
3 – Am not capable of dispensing own medication
4 – Not applicable, does not take medication

(8) Ability to handle finances:

1 – I manage financial matters independently (e.g., budget, write checks, pay rent, pay bills, go to the bank); collect and keep track of income
2 – Manage day-to-day purchases, but need help with banking, major purchases, etc.
3 – Incapable of handling money

Katz Activities of Daily Living Scale (ADL)

Please rate yourself for the following *activities of daily living* FOR THE PAST TWO WEEKS.

(1) Using the bathroom:

1 – Care for self at toilet completely, no incontinence or accidents
2 – Need to be reminded, or need help in cleaning self, or has rare (weekly at most) accidents
3 – Soils or wets self only while asleep more than once a week
4 – Soils or wets self while asleep and/or awake more than once a week
5 – No control of bowels or bladder

(2) Eating:

1 – Eat without assistance, do not need help in preparation or cleaning up
2 – Eat with minor assistance at meal times and/or with special preparation of food or help in cleaning up after meals
3 – Feed self with moderate assistance and is untidy
4 – Require extensive assistance for all meals
5 – Do not feed self at all and resists efforts of others to feed him or her

(3) Dressing:

1 – Dresses, undresses, and selects clothes from own wardrobe
2 – Dresses and undresses self, with minor assistance
3 – Needs moderate assistance in dressing or selection of clothes
4 – Needs major assistance in dressing, but cooperates with efforts of others to help
5 – Completely unable to dress self and resists efforts of others to help

(4) Grooming (neatness, hair, nails, hands, face, clothing):

1 – Always neatly dressed, well-groomed without assistance
2 – Groom self adequately with occasional minor assistance, e.g., shaving
3 – Need moderate and regular assistance or supervision in grooming
4 – Need total grooming care, but can remain well-groomed after help from others
5 – Actively negates all efforts of others to maintain grooming (does not remain well groomed, gets messy after help from others)

(5) Physical ambulation (physical ability to walk, get around):

1 – Walk around neighborhood or city without physical assistance
2 – Walk within residence or about one block distance without physical

assistance
3 – Walk with assistance of another person and/or railing
4 – Walk with assistance of a cane and/or walker
5 – Get around with assistance of a wheelchair

(6) Bathing:

1 – Bathe self (tub, shower, sponge bath) without help
2 – Bathe self with help in getting in and out of the tub
3 – Wash face and hands only, but cannot bathe rest of body
4 – Do not wash self but is cooperative with those who bathe me
5 – Do not try to wash self and resists efforts to keep myself clean

Philadelphia Geriatric Center (PGC) Affect Rating Scale

Now I would like you to answer these questions based on how you have been feeling lately. Your choices here are "not at all," "a little," "moderately," "quite a bit," or "extremely".

0	1	2	3	4
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

1. How much have you felt energetic? _____
2. How much have you felt annoyed? _____
3. How much have you felt warm towards other people? _____
4. How much have you felt depressed? _____
5. How much have you felt interested? _____
6. How much have you felt irritated? _____
7. How much have you felt happy? _____
8. How much have you felt worried? _____
9. How much have you felt content? _____
10. How much have you felt sad? _____

Geriatric Depression Scale-Short Form

1. Are you basically satisfied with your life? YES / **NO**

2. Have you dropped many of your activities and interests? **YES** / NO

3. Do you feel that your life is empty? **YES** / NO

4. Do you often get bored? **YES** / NO

5. Are you in good spirits most of the time? YES / **NO**

6. Are you afraid that something bad is going to happen to you? **YES** / NO

7. Do you feel happy most of the time? YES / **NO**

8. Do you often feel helpless? **YES** / NO

9. Do you prefer to stay at home, rather than going out and doing new things? **YES** / NO

10. Do you feel you have more problems with memory than most? **YES** / NO

11. Do you think it is wonderful to be alive now? YES / **NO**

12. Do you feel pretty worthless the way you are now? **YES** / NO

13. Do you feel full of energy? YES / **NO**

14. Do you feel that your situation is hopeless? **YES** / NO

15. Do you think that most people are better off than you are? **YES** / NO

Answers in **bold** indicate depression. Although differing sensitivities and specificities have been obtained across studies, for clinical purposes a score > 5 points is suggestive of depression and should warrant a follow-up interview. Scores > 10 are almost always depression.

Multidimensional Observation Scale for Elderly Subjects

0	1	2	3
Not at all, N/A, DK	Seldom	At times	Often

How often during the past week did the resident look sad or depressed? _____

How often during the past week did the resident say (or write) something to indicate that he/she was sad or depressed? _____

How often during the past week did the resident sound sad or depressed? _____

How often during the past week did the resident look worried, tense, and anxious? _____

How often during the past week did the resident say (or write) something to indicate that he/she was worried or anxious about something? _____

How often during the past week did the resident cry? _____

How often during the past week did the resident say (or write) something to indicate that he/she felt pessimistic about the future? _____

How often during the past week was the resident irritable and grouchy? _____

How often during the past week did the resident respond to social contacts made by other people? _____

In the past week, how often did the resident pay active attention to the things happening around him? _____

In the past week, how often did the resident seem to take any interest in events happening outside of his/her residence? _____