A CULTURAL PSYCHOSOCIAL MODEL FOR DEPRESSION IN ELDER CARE INSTITUTIONS: THE ROLES OF SOCIALLY SUPPORTIVE ACTIVITY AND SELF-TRANSCENDENCE

by

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ABSTRACT

This study (1) developed and tested the Socially Supportive Activity Inventory (SSAI) to assess the quantity and quality of socially supportive activities that institutionalized elders receive, and (2) tested the predicted relationships among the variables proposed in the hypothesized causal model, socially supportive activities, self-transcendence, and depression in institutionalized elders. For pilot testing psychometric properties of the SSAI, the content validity was 0.96. Test-retest reliability from a sample of 10 participants yielded stability coefficients of 0.76-1.00, indicating the SSAI is a highly relevant and reliable culturally-based instrument. In the main study, a total of 196 participants were recruited from eight elder care institutions. The results showed an elder's expectation of filial responsibility did not have a moderating effect on the willingness to be/remain institutionalized and on perceived stress. An elder's acceptance of institutionalization was significantly related to perceived stress and indirectly affected depression. The mediator effect of self-transcendence on the relationship between perceived stress and depression was supported. The participation of elderly residents in socially supportive activities demonstrated a moderating effect on the strength of a negative relationship between perceived stress and self-transcendence. In the modified model, an elder's willingness to remain institutionalized, perceived stress, and self-transcendence were significant predictors of depression, accounting for 54.7% of variance. Self-transcendence was the best predictor of depression. These findings contribute to an awareness of importance of culture factors as potential stressors. These findings also help to explain how the psychosocial mechanism of participation in socially supportive activities and the perception of self-transcendence act on depressed elders.

CHAPTER ONE: INTRODUCTION

Introduction

Over the past 60 years, Taiwan dramatically changed from an agricultural country to an industrial, developed nation. Among other effects, industrialization and urbanization have impacted Taiwanese ecology as well as the traditional Chinese ideologies, philosophies, values, and practices. Likewise, younger generations have achieved higher levels of education, income, and overall quality of life in comparison to older generations. There are also now more women employed in the formal workforce. Prior to these changes, the majority of family structures were multiple generations co-residing in the same household. Today, there are more nuclear households. The average number of children per family has decreased from six in the early years of 1950's to 1.02 in 2008 (Directorate-General of Budget, Accounting & Statistics, Executive Yuan, R. O. C., 2008). These transformations have, in turn, resulted in fewer family caregivers for elderly family members in need of assistance.

The demand for institution-based care is increasing due to the constantly increasing number of elderly people in Taiwan. The rapid rise in institutional care for older adults has not, however, been sufficiently assessed or studied. Even though the first registered nursing home was established in 1990, researchers have only just recently started scrutinizing the quality of institutional care. There is, therefore, a clear need for large-scale studies of such institutions to improve care of the elderly and to enhance their quality of life.

One major area of concern that has not yet been adequately addressed is the psychological well-being of the elderly in such institutions. Depression, in particular, is a problem. Although diverse social and recreational activities in elder care institutions have been

provided to enrich a person's mental well-being amidst what is a relative monotonous life, few studies have examined their impact. Given that some initial studies have shown relatively low rates of participation in such activities, along with a high prevalence of depression, it has become critical to assess effects of such activities and other associated factors on psychological well being. This study was the initial examination of the effect of socio-cultural architecture on psychological health.

Purpose of Study

This study was to (1) develop and test a culturally sensitive instrument to assess the quantity of socially supportive activities that institutionalized elders receive as well as their perceptions of the quantity and quality of such support, and (2) test the predicted relationships among the variables proposed in the hypothesized causal model of socially supportive activity, self-transcendence, and depression in institutionalized elders. The hypothesized causal model is illustrated in Figure 1.

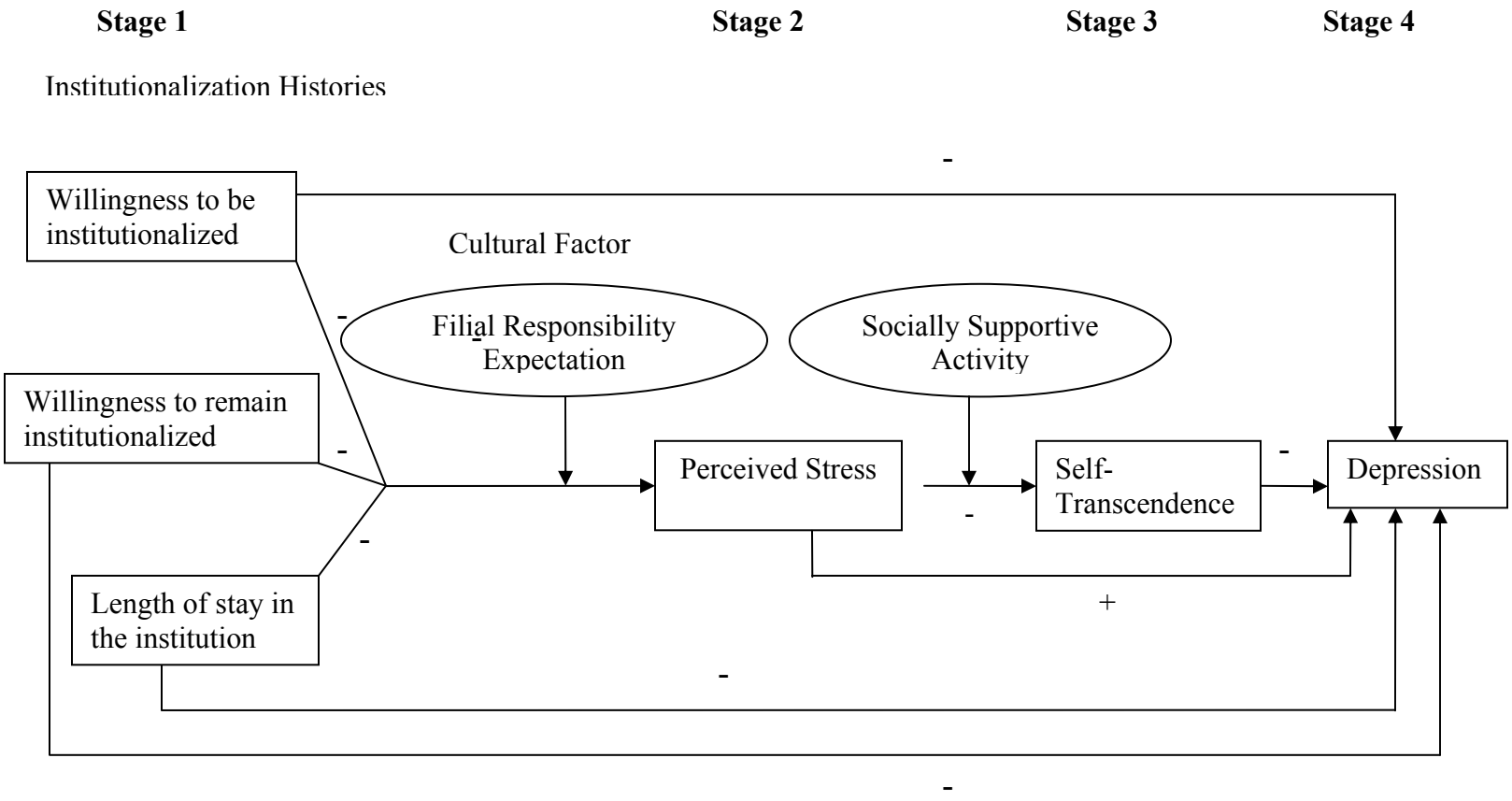


FIGURE 1. Theoretical Model of Relationships Among Variables of Cultural Factors, Stress, Self-transcendence, Socially Supportive Activity and Depression.

Definitions of Constructs and Concepts

Before the description of the theoretical framework, definitions of constructs and concepts present in the theoretical framework will be defined in a summary table based on the sequential stages (Table 1).

TABLE 1. Definitions of Constructs and Concepts

Construct	Concept	Definition
Stage 1 Institutionalization histories		The significantly relevant records of institutional admission
	Willingness to be institutionalized	The extent of the elder accepts being admitted to the elder care facility
	Willingness to remain institutionalized	The extent of the elder accepts to remain in the elder care facility
	Length of stay in an institution	The duration of living in the elder care facility
Cultural factor		A person's thinking, decisions, and actions in patterned ways of life which are shaped by the learned and transmitted values, beliefs, and norms of a particular group to enable an individual to maintain one's health (Leininger, 2001).
	Filial responsibility expectation	Filial responsibility expectation is the measure of an elder's perception of filial piety. Filial responsibility expectation is related to aged parents belief about adult children's duties and responsibilities toward them.
Stage 2 Social Support		A multidimensional construct including support network resources, supportive behavior, and subjective appraisals of support which is linked in a dynamic complex process of transactions between individual and one's social environment (Vaux, 1988).
	Perceived stress	How an elder appraises one's life as stressful

TABLE 1. - *Continued*

Construct	Concept	Definition
	Socially supportive activity	Refers to the elder's participation in any activity that regularly takes place and involves socialization that enables the elder to feel supported by interacting with others within his/her available network including family, relatives, friends, fellow residents, volunteers, or other acquaintances. This interpersonal interaction creates the sense of being cared for, of having companionship, and of connecting with life.
Stage 3 Self-transcendence	Self-transcendence	A major psychosocial resource of developmental maturity which allows a person to expand self boundaries intra-personally through introspective experiences and awareness of one's philosophy and values, inter-personally by reaching out to others and interacting with one's environment, temporally by integrating past and future experiences to enhance the present, and trans-personally related to religious beliefs (Reed, 1991[a]; 2003)
Stage 4 Depression	Depression	The presence of a set of depressive symptoms including depressed mood, sadness, crying, thoughts of hopelessness, helplessness, and worthlessness, losses of interest, energy, and appetite, disturbed sleep, and fatigue that indicate a person may be depressed.

Significance of Study

This descriptive study was the first study to explore the relationships between cultural factor of filial piety, perceived stress, socially supportive activity, self-transcendence, and depression among elderly Taiwanese. Knowledge gained from the description of the predictors of depression was useful to elder-care providers in their efforts to recognize and prevent depression. A major contribution of this study was increased awareness of the importance of

cultural factors as potential stressors in caring for elderly Chinese who live in institution. Research findings helped explain how the psychosocial mechanism of participation in socially supportive activities and the perception of self-transcendence acted on depressed elders during their transition to institutionalized life. Findings also provide a better understanding about the direct and indirect relationships between depression and the proposed variables, including elders' institutionalization histories, cultural factor of filial piety, perception of stress, socially supportive activities, and level of self-transcendence. Understanding these directional relationships will help geriatric professionals to develop appropriate interventions within a proper temporal framework to diminish stress, to promote self-transcendence, and to ameliorate depression. Most significantly, these findings revealed the critical external buffering and inward developmental mechanisms of depression that explained how socially supportive activity influences stress and individual's self-transcendence, which, in turn, affects depression. Finally, by establishing a reliable, culturally appropriate instrument for measuring socially supportive activity, this study offered clinical professionals a tool for determining the degree to which planned activities for Chinese institutionalized elders met their psychosocial needs.

Background

Aging Population in Taiwan

According to the World Health Organization, Taiwan is encountering a continuously increasing elderly population and a declining the proportion of children and young people in terms of population ageing. Elderly is defined as the chronological age of 65 years or older. The elderly population comprised 3.4% of Taiwan's populations in 1976, but nearly tripled to 10.2% in 2008. Projections estimate that older adults will comprise as much as 20% of Taiwan's

population by 2025 (Department of Statistics, 2008). At least 70% of Taiwanese elders suffer from one or more chronic illnesses, such as cancer, cerebral vascular disease, hypertension, heart disease, diabetes, and arthritis (The Executive Yuan, 2000). 9.7% of this country's elderly population is disabled and needs long-term care services (Ministry of the Interior, 2007). In 2002, 7.6 % of the elderly population (approximate 200,000 Taiwanese elders) were admitted to institutional care, compared to 0.9% in 1996 (Directorate-General of Budget, Accounting & Statistics, Executive Yuan, R. O. C., 2006). Given these realities, the climate for younger relatives being able to provide care for their aging family members is a salient concern for health care professionals and health policy makers.

The Demands of Elderly Institution-based Care Facilities in Taiwan

Statistically, the number of long-term, institution-base care facilities in Taiwan has increased 85.5% in the new millennium (from 524 in 2000 to 972 in 2007) (Department of Social Affairs, MOI, ROC, 2007). The vast majority of residents in institution-based care facilities are older adults. Co-morbidity accompanied with adverse outcomes of advanced age has led to greater demands for care of disabled elders. Most elderly care is delivered at home, as is preferred by aged adults. According to tradition, family members are expected to take responsibility for caring for elderly family members. As a consequence of demographic, economic, and social changes in Taiwan, however, a concomitant decline in traditional family-based support for elderly care accelerated a greater demand for institutional care of such persons.

Prevalence of Depression in Taiwanese Nursing Homes

In Taiwan, 43.3%-65.3% of institutionalized elderly adults have a higher prevalence of depression than those who remain at home (Lin, Wang, Chen, Wu, & Portwood, 2005; Tsai,

Chung, Wong, & Huang, 2005; Tsai, Wei, Lin, Chien, 2005; Tsai, 2006, 2007). These figures are also higher than those found among comparable residents in the U. S. The estimated prevalence rate of depression in the U.S is 14%-20% (Jones, Marcantonio, & Rabinowitz, 2003; Teresi, Abrams, Holmes, Ramirez, & Eimicke, 2001). Possible explanations for a higher prevalence rate of depressive symptoms among Taiwanese might be found in the following areas: the Chinese cultural effect of filial piety; the overall low education level of elderly Taiwanese adults; and lack of available physician resources to detect and treat symptoms (Lin, et al., 2005).

Depression is a common trans-cultural phenomenon frequently seen in elder care institutions. The term "depression" utilized in this study referred to depressive symptoms. Depression was defined as the presence of a set of depressive symptoms that indicate that a person is experiencing depression. Depressive symptoms include affective symptoms such as a depressed mood, sadness, apathy, and crying; cognitive symptoms such as thoughts of hopelessness, helplessness, suicide, worthlessness, and loss of interest or pleasure in usual activities; and somatic symptoms such as loss of energy, appetite, disturbed sleep, and fatigue, (Brink, Yesavage, Lum, Heersema, Adey, Rose, 1982; NIH, 1992). The terms depression and depressive symptoms were used interchangeably throughout this study. A diagnosis of depression is related to major depression disorder and is diagnosed based on the standard criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association 2000).

Depression has been commonly associated with hospitalization and nursing home admissions (Harris & Cooper, 2006). Compared to non-depressed elders, depressed nursing home residents have higher co-morbidity, greater social withdrawal, (Watson, Garrett, Sloane,

Gruber-Baldini, & Zimmerman, 2003), longer length of residence in the facility (Koening & Kuchibhatla, 1999), greater odds of worsening functional disability (Lenze, Schulz, Martire, Zdaniuk, Glass, et al., 2005), and poor quality of life (Borowiak & Kostka, 2004). Likewise, elderly Taiwanese with physical illnesses are 3.7 times more of risk of developing depression (Chong, Chen, Tsang, Yeh, Chen, et al., 2001). The degree of social support or lack there of, is a pertinent factor and is significantly correlated with depression in institutionalized elders (Cabness, 2003; Jongenelis, Pot, Eisses, Beekman, Kluiter, Ribbe, 2004; Holahan & Holahan, 1987; Nelson, 1989). Perceived lower levels of social support are correlated, for example, with an increase in depressive symptoms (Newom & Schulz, 1996; Roberson, Lichtenberg, 2003). At the same time, it appears that depressive symptoms decline when such elders' social support networks and supportive behaviors are enhanced and purposefully managed.

Social Support

Quality of social support is a salient characteristic of the resilience of older adults in adapting to institutional long-term care (Cabness, 2003) and a higher degree of social support prevents depression (Holahan, et al., 1987). Traditionally, Taiwan is a patriarchal kinship society organized around the Chinese family system. Within this context, strong norms of filial piety demand that children care for their elderly parents. Elder care and support are viewed as moral obligations. Elders expect their children to take care of them by way of fulfilling their family obligations as they have done for their parents in prior generations. Therefore, placing aged parents in an institution rather than caring for them at home violates traditional family ethics and may, in turn, induce stress among elderly family members. In short, institutional relocation may adversely impact an elder's psychological health. The negative reactions can include the feelings

of having been discarded, powerlessness, hopelessness, loneliness, and disconnections with family and friends. These negative feelings are common stressors that can cause depression.

Other stressors for such institutionalized persons include ongoing physical decline, a loss of independence, and alienation within new living environment. Additionally, most institutionalized Taiwanese elders do not acknowledge the presence of such stressors primarily due to a cultural attitude of self-sacrifice. They may, for instance, avoid dealing with such stressors to maintain family harmony. Having survived accumulated past experiences, elders have a special wisdom that allows them to transcend life's difficulties. However, failure to cope with the stress can result in psychological distress and adverse health outcomes, particularly depression. More and more studies focus on the relationships between stress and depression (Brilman & Ormel, 2001; Chou & Chi, 2001) as well as examine the relationship between self-transcendence and depression in western countries (Ellermann & Reed, 2001, Klaas, 1998; Reed, 1986; 1989, Stinon & Kirk, 2005). By contrast, studies of how transitional stress and self-transcendence correlate with depression among institutionalized elders in Taiwan are extremely limited. Therefore, it is of the utmost importance to add such cultural influences into the exploration of correlations among perceived stress, the level of self-transcendence, and depression.

Institutionalized elders on the whole, appear to view their life in institutions as a major source of stress and to perceive support from their social networks as a way to overcome or to shorten the transition from home to institution. Receiving and perceiving adequate support has a buffering effect. In fact, evidence has shown that perceived support from network resources is more important than actual support in individuals adjusting to stressful life events (Helgeson,

1993; Wethington & Kessler, 1986). Nevertheless, social activity involves more than just interaction with kith and kin. Social support includes supportive behaviors and social networks in general. Institutionalized elders interact with others by participating in social activity within their available network resources. This also acts as a coping mechanism to aid adjustment to institutional relocation. Ongoing participation in such social activity can also promote effective conflict resolution, enhance one's sense of being cared for by other, improve the meaning of life, and provide potential companionship within residential networks. These outcomes can substantially compensate for loss of family supports experienced by institutionalized elders. They can reduce negative responses to institutionalization and, in turn, alleviate psychological distress.

Studies found the positive effects of social activity on improving health and reducing mortality and depression (Everard, Lach, Fisher, & Baum, 2000; Glass, Mendes de Leon, Bassuk, & Berkman, 2006; Lennartsson & Silverstein, 2001). Unfortunately, in past decades, most research on social activity and health of elders did not include vulnerable institutionalized elders. More specifically, such studies have not included Taiwan's elderly population. Additionally, previous studies about the social activity of institutionalized elders have mainly focused on recreational activities and have not taken into account residents' daily interactions with fellow residents, volunteers, or other acquaintances -- all of which involve significant socializing and offer a potential for dynamic supportive behaviors and improved psychological health. Of course, quality of family support and contact is also a significant factor due to the Chinese society being a family-centered culture.

From an ecological perspective, support is a transactional process between an individual and a social network (Vaux, 1990). Individuals actively develop and maintain a network of resources that elicit and obtain supportive behaviors from the network by managing support incidents and subjectively appraising support. A larger and more diverse network is helpful in providing different modes of supportive behavior in time of needs (Vaux, 1990). Thus, activities that involve social resources from residential and family networks must be added to any serious study of social activity and health for institutionalized elders in Chinese society.

Currently, however, the majority of well-established instruments used to assess social activity are used for community populations. The generalizability of these instruments to institutionalized elderly populations is limited due to the different resources available to older adults in communities or institutions. Likewise, there is no available instrument that is solely focused on social activities that incorporate interpersonal interactions within a broader social network for institutionalized elders. Already developed instruments are also inadequate for Eastern cultures because perceptions of desired social activity vary between cultures. It appears necessary, therefore, to develop a culturally sensitive instrument from a social ecological perspective to measure the extent to which institutionalized elders participate in social activities as broadly defined by the author. Such a culturally valid instrument will engender rich, reliable cross-cultural research. Therefore, in this study, social activity was redefined as "socially supportive activity" that is, an elder's participation in any activity that regularly takes place and involves socialization which enables an elder to feel supported through interaction with others within the available network of resources, thus creating a sense of being cared for, companionship, and connection with life.

Finally, an elder care institution is a new community that includes amenities, administration staff, nursing staff, other residents, other associated care providers such as a recreational coordinator, physical therapists, and dieticians, and outside supporters from volunteer organizations. Significantly, in Chinese society, the elderly resident's family is considered one of the key community members. Still, all community members are important sources of social networking and have equal opportunities to provide different types of supportive behavior such as emotional support and social companionship to the residents by participating in social activities. Institutionalization shifts sources of support of the elderly from the familiar family system and its associations to institutionally relevant resources such as staff members, health care providers, and other neighboring residents.

Theoretical Model

This was a cross-cultural study. Cultural factors were as important as the general theories underlying the theoretical framework as seen in Figure 1. This was also a psychosocial study from a nursing perspective. The fields of psychology, sociology, and nursing as well as Chinese cultural factors all contributed to this study of depression among elderly Taiwanese residents in elder care institutions. There were two major theories that have been examined and incorporated to formulate the final hypothesized theoretical model. The first was the theory of social support from sociological and psychological perspectives. The second was Reed's (2003) theory of self-transcendence from a nursing perspective. Figure 1 presents theoretical, causal relationships among the proposed variables including individual characteristics, filial responsibility expectation, perceived stress, socially supportive activity, self-transcendence, and depression.

There were four stages in the hypothesized model. Each stage contained one to two main constructs with one to three concepts. In stage 1, two main constructs included institutionalization histories and a cultural factor. The construct of institutionalization histories consisted of the concepts of an elder's willingness to be institutionalized, an elder's willingness to remain institutionalized, and the length of stay in an institution. The concept of filial responsibility expectation was an additional construct which was the cultural factor of filial piety on stage one. An elder's expectation of filial responsibility was hypothesized as a moderator. All relevant concepts have been defined in Table 1.

Stage One: Institutionalization Histories and Cultural Factor

Institutionalization Histories: Willingness/unwillingness to Be/Remain Institutionalized

For most adult children and their parents, institutionalization is often a reluctant choice. Nonetheless, empathizing with the constraints and conflicts forced upon their children, the aged parent may agree to be admitted to an elder care institution. Other aged parents may not willingly agree to institutional relocation, but they have no power to resist because they are too frail or unable to make their own decision. Superficially, they may agree with the new living arrangement, but inwardly they may morally fight with and be genuinely unhappy with this decision. In either case, such elders are susceptible to psychological distress. In short, such an elder's level of acceptance of or adjustment to this modern violation of filial expectations can be a critical factor in the relocated elder's psychological well-being. Negative responses such as a depressed mood, being upset, and a loss of purpose in life may persist or get worse during elders' institutionalization. At the same time, irrespective of the elder's willingness to be

institutionalized, the family's behavioral fulfillment of filial obligation may be changed into alternative expressions.

Cultural Relevant Studies of Institutional Placement

Some studies have been done on risk factors faced by institutionalizing elderly Taiwanese. They include advanced age, gender (women are at greater risk than men), educational level (the higher one's education, the less the risk), marital status (being single/widowed is riskier than being married) (Liu & Tinker, 2001; Shyu & Lee, 2002), higher levels of dependency (Liu et al., 2001; Kao, 2003; Shyu et al., 2002), lower cognitive functioning, perceived public opinion, previous home-care by female caregivers (Kao, 2003), the elder's pre-admission institutionalization, the caregiver's preference for institutional displacement (Shyu et al., 2002), accessibility of nursing home facilities near family residences (Chiu, Tang, Liu, Shyu, Chang, & Chen, 1998), and caregiver burden (Kao & McHugh, 2004). Elderly people with difficulties performing activities of daily living (ADL) are especially at risk: 2.5-times the risk for nursing home entry (Liu, et al., 2001). Unfortunately, there is no study exploring the relationships between the number of children and the elder's willingness of institutionalization and the length of stay in an institution in Taiwan and the consequent impacts on depression. Additionally, no study has examined the associated relationship between these cultural variables and elder's perception of stress after institutionalization.

Cultural Factor: Filial Piety

Confucianism is a major East Asian ethical and philosophical system. Taiwan is a patriarchical and hierarchical society that has been deeply influenced by Confucianism. Fulfilling filial piety is the cornerstone of the Confucian ethic. Filial piety serves as a guiding

principle of Chinese patterns of socialization and is an ethnic rule of intergenerational conduct (Ho, 1996). Filial piety refers to providing the material and psycho-social-spiritual well-being of one's aged parents, performing rites of worship in honor of deceased parents and ancestors, keeping aged parents away from harm, ensuring the continuity of the family line, and bringing honor and not disgrace to the family name (Ho, 1994). Simply put, filial piety is "to satisfy parents' daily needs and to support them in their older age" (Hsu, Ting, &Wu, 2001). Examples of filial behaviors include obedience to and respect for parental authority, co-residing with older parents, supplying living funds, and taking care of daily needs for aged parents (Hsu, et al., 2001; Lin, Goldman, Weinstein, Lin, Gorrindo, & Seeman, 2003).

Family Roles Involved in Enacting Filial Piety

The Chinese say that the core values of a large family, especially male children, are not only to continue the family name, but also to "prevent shortage of availability of caregiving when they get old." In general, sons bear the majority of responsibility for taking care of their older parents, especially the oldest son. However, daughters substitutionally fulfill the obligation in the absence of sons (Lin, et al., 2003). A daughter's caregiving obligations for her older parents end at marriage. Married daughters are often considered guests in their maiden family and the daughter-in-law is obligated to support to her husband's parents (Kao & Stuifbergen, 1999; Hsu, et al., 2001; Lin, et al., 2003). Sons provide more financial support as well as care for independent activities of daily life (Lin, et al., 2003). Empirical evidence from adult children who provide support to their parents who live with them has shown that adult children generally provide help with activities of daily life (e.g.

bathing, dressing), assistance with household chores (e.g. shopping, meal preparation), provision of financial support , and provision of material support (e.g. food, clothing, or other goods). Obligation, karma, and benevolence are major reasons for undertaking the duty of caring for disabled elderly family members in Taiwan (Kao, et al., 1999). When both parents and children perceive higher filial responsibility, aged parents receive more support from children (Ikkink, Tilburg, & Knipscheer, 1999).

Effects of Social Changes on Filial Piety

Contemporary Taiwanese elders have experienced harsh wartime conditions as well as rapid societal changes. Today, there are a large proportion of elderly Taiwanese who are illiterate and have limited education. During the Japanese colonial period (1895-1945), less than 5% of the Taiwanese school-aged population was enrolled in elementary school in 1905 (Tsurumi, 1977). In 2005, 73.85% of older adults had little elementary education or were illiterate (Ministry of the Interior, 2007). Most have spent a sizeable proportion of their adulthood in a traditional agricultural society and have preserved traditional Confucian values. Subsequent generations coexist with traditional and modern values in a transitional society. Some traditional values such as thrift and job stability are coexisting with modern values and may be syncretizing to create a new value system more appropriate to rapid societal changes. However, the importance of core traditional Chinese values have not changed across the generations (Lu & Kao, 2002; Lin, Zhang, Harwood, 2004). With rapid social changes due to modernization and urbanization, filial attitudes are changing between generations and are resulting in negative psychological consequences (Ho, 1996; Hsu et al., 2001; Cheng & Chan, 2006). Rather than co-residence with children as a main indicator of filial behavior, alternative filial behaviors of

supportive parental care have been sought to adjust to the social changes to decrease the discrepant expectations between aged parents and their children (Hsu, et al., 2001; Cheng, et al., 2006). When elders become institutionalized, day-to-day, tangible, material, and household assistance which is provided by co-residing children tend to be replaced by emotionally supportive acts such as visiting or calling as well as financial or instrumental support such as paying for household services.

Impact of Social Changes on Living Arrangement

Taiwan's elderly population has experienced rapid transitional changes including less co-residence and smaller family size following modern industralization and urbanization (Cheng, et al., 2006). The impact of the traditional Chinese beliefs and values influence one's attitudes toward institutional placement of the aged. In general, younger generations appear to be more comfortable and acceptable with it than older generations. Nonetheless, when there is a shortage of available caregivers in a household usually due to the time constraints of dual income family and career goals, placing a disabled elderly family member into an institution may be an inevitable.

Consequences of Differing Expectations of Filial Responsibilities

Caring for aged parents in the home is a cardinal family ethic and filial responsibility is highly valued and expected by aged parents. Today, however, many adults children prefer to place disabled elders into an institution. These discrepant expectations may generate conflicts between the generations and may cause psychological distress for aged parents as well as their adult children. Especially for elders who are unwillingly placed in institutions, such conflicts can lead to depression.

In keeping with to the Confucian philosophy of the five cardinal relations, an elderly family member possesses higher authority in his/her family. An elderly parent should be respected and cared for by their children. When an elderly parent is admitted to an elder care institution by his/her child, this may be perceived by the elder as a loss of control over one's self and one's family. Additionally, such an action may generate negative public opinion because it is perceived as a violation the traditional norm. For many elders, in fact, it is considered as a stigma and a family scandal that is not honorable to speak about in public. This can, in turn, become a major stressor for the elder, but often goes unrecognized by aged parents and their children.

Operational Congruence with the Study

As stated earlier, elders' Taiwanese traditional cultural values conflict with their children's new values, attitudes, and behaviors within a transitional society. At same time, there is an increasing number and an increasing need for institutional care accompanying these rapid societal changes. Moreover, institutional relocation of an elder person violates the traditional idea of in-home care for the aged and Confucian filial piety. This can cause, in turn, stressors and lead to depression after institutionalization. Nonetheless, sufficient financial, emotional, and companionship support of elderly family members by their children may be re-considered as an alternative fulfillment of filial piety. Consequently, aged parents may modify their original expectations of filial responsibility subsequently reducing their level of stress. Day-to-day care originally provided by family members will shift to financial support by periodically paying the residential fee and living expenses in the institution. Emotional support will be demonstrated through frequent visitation and calling. Supportive companionship may take the form of conversations or interactions during family visits. Moreover, children's awareness of the

importance of such supportive activities and increasing the frequency of these activities significantly help the aged parent adjust to a new life in the institution and prevent a negative psychological consequences.

Although there is no empirical evidence about the relationships between the number of children, the willingness to be institutionalized, the elder's expectation of filial responsibility, and the incidence of depression, it is valuable to explore these relationships in Chinese society. These relationships point to the following questions: How does the number of children as well as other elderly individual characteristics affect the elder's willingness to be/remain institutionalized and how do these factors affect the length of stay in an institution? How do these factors relate to the incidence of depression? How do the degree of willingness of be/remain institutionalized and the length of stay in an institution affect the elder's perception of stress and are they significant indirect effects on depression? Finally, what is the role of the elder's filial responsibility expectation?

The links between the elder's institutionalization histories, cultural factor of filial responsibility expectation, stress, and depression are derived from the above propositions and showed in Figure 1. An elder's willingness to be and to remain institutionalized and length of stay in an institution are assumed to have a negative association with perceived stress and can have a direct or indirect effect on depression. Theoretical relationships among cultural factor and stress are congruent with the theory of social support.

Stage Two: Social Support

In stage 2, social support is the major construct of the study and includes the concept of elderly perceived stress and socially supportive activity.

Theory of Social Support

There are various theories relevant to the health effects of social support. Those that aid the exploration of the researcher's questions have been adopted. They include theoretical perspectives regarding the effect of social support on health (especially stress) and a coping perspective, a social constructionist perspective, and a relationship perspective (Lakey & Cohen, 2000). The foci emphasize supportive actions that contribute to well-being through enhancing coping performance and protecting people from the effects of stress within an available support network (Lakey, et al., 2000).

Social support protects a person from a crisis and the adverse psychological consequences of stress in life (Cobb, 1976; House, 1981; Cohen & Wills, 1985). Social support is defined as a multidimensional construct including support network resources, supportive behaviors, and subjective appraisals of support which is linked in a dynamic process of transactions between an individual and one's social environment (Vaux, 1988). Social support is given willingly to a person and produces a positive response in the recipient (Hupcey, 1998). Social support is the access to and use of social resources for one's well-being (Lin, 1986). Social support involves interpersonal interactions and relationships which provide emotional support and instrumental aid by members of the individual's social network to meet a person's basic social needs (House, 1981; Norbeck, 1982; Thoits, 1982).

Social support acts as a buffer, positively affecting one's well-being in the presence of stressors (Cohen & McKay, 1984; Cohen, et al., 1985; Vaux, 1988). According to a stress-buffering model of social support and illness developed by Cohen and Wills (1985), stress can be caused when a person appraises a situation as threatening or over-demanding and does not have

an appropriate coping response. In a buffering effect, a person perceives the presence of stress and then relies on support as a coping mechanism to reduce any possible adverse health outcomes. This effect may play a causal role at two different points in time. It may occur during the appraisal process when a person recognized an event as being potentially stressful. Intervening support may prevent a stress appraisal response. This may also appear between the appraisal moment and the consequent illness response. The effect of stress–buffering measures perceived availability of interpersonal resources that can provide supportive functions for the needs induced by the stressful events (Cohen, et al., 1984; Cohen, et al., 1985).

Adequate intervening support may alleviate or eliminate the stress reaction or influence the health outcomes. Acting as a buffer, social support facilitates the psychological and behavioral process of coping and adaptation in the face of stress, thus promoting positive health (Cohen, et al., 1985; House, 1981; House, Umberson, Landis, 1988). This buffering effect can occur within the experience of high, moderate, low, or even no levels of stress (House, 1981; Cohen, et al., 1985). Buffering assumes that "the higher the initial level of support and the greater the degree to which this level is maintained throughout a crisis period, the less impact life changes will have upon psychological state" (Thoits, 1982, p.154). To reduce the impact on one's psychological state, an individual should retain a high level of social support as a buffer. Evidence also indicates that perceived support is more significant than received support in adjusting to stress, and has a greater impact on psychological health (Wethington, et al., 1986; Auslander & Litwin, 1991; Helgeson, 1993). The supportive behaviors can also be altered throughout the stress process. Influential factors of supportive behaviors consist of event

occurrence, primary and secondary appraisal of the event, coping resources, and coping efforts (Vaux, 1988). Figure 2 illustrates the effect of stress-buffering of social support on health.

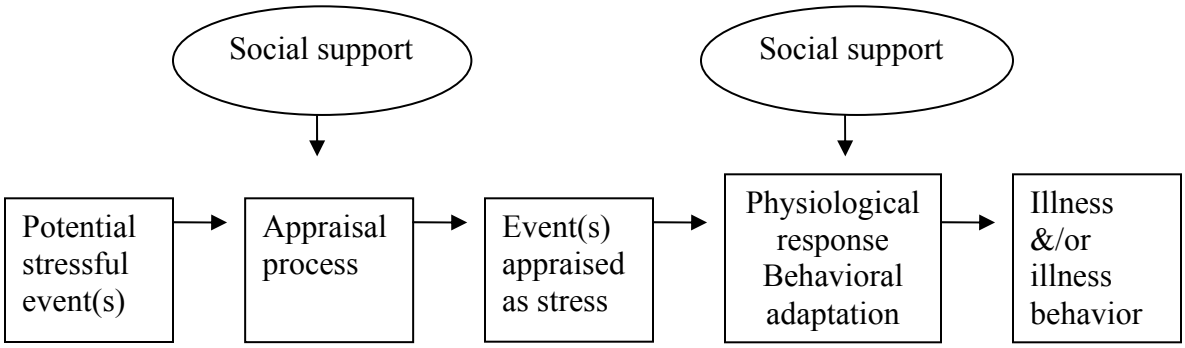


FIGURE 2. Cohen and Wills' Model of Stress-buffering of Social Support on Health

Support is obtained from one's social network. A social network is "the web of social ties that surrounding an individual" (Berkman, 1984, p. 414). Characteristics of a social network include size (the number of network members), density (the extent to which a network is interconnected by the network members), frequency (the quantity of contact between two network members), duration (the length of time a relation exists), degree (the extent to which a network member is tied), symmetry or reciprocity (the extent to which support elements are equally exchanged), boundedness (the proportion of all ties of network members), accessibility (the extent to which the person can easily contact other network members), and homogeneity (the extent to which network members have similar personal attributes) (Berkman, 1984; Hall & Wellman, 1985). Sources of supportive acts range from informal sources such as family and friends to people connected with major life roles, such as health-related supporters (House, 1982). Different social resources produce different social actions. For older people, informal, non-familial, and voluntary relationships are an important source of social networking that

involve a great deal of their time, energy, and activity after retirement and significantly maintain their mental and physical health (Shore, 1985).

Modes of supportive behaviors and their possible buffering effects include instrumental support, emotional support, informational support, esteem support, and social companionship (Cobb, 1976; House, 1981; Cohen, et al., 1985). Instrumental support involves tangible aid that directly helps the person in need and may reduce stress and result in direct resolution of instrumental problems and increased time for activities. Emotional support involves providing empathy, care, love, intimacy, and trust. Informational support involves a person providing information, advice, and guidance that can be used to deal with stress and environmental problems. Esteem support enhances a person's self-esteem and sense of self-worth. Self-esteem may protect a person from the threat of lowered self-esteem as a result of stressful events. Social companionship is spending enjoyable time with others during leisure and recreational activities that may reduce stress. Stress is reduced by increasing opportunities for contact with others and facilitating positive affective moods (House, 1981; Cohen, et al, 1985). Functional support is linked to the social environment (Lin, 1986). The occurrence of life-changing events can cause changes in the social support system because support is a dynamic variable (Thoits, 1982). Life-changing events alter social support and impact psychological well-being. When a person experiences an unfamiliar or undesirable life event, it impacts the levels of depressive symptoms (Lin, Woelfel, & Light, 1986).

Theory of Social Support in the Theoretical Framework

For Taiwanese elders to being placed in an elder care institution is a significant life-changing event as they have high expectations for having their needs met by younger generations

at home. As a result, being admitted to an elder care institution is considered a stressful transition for elderly Taiwanese residents that may result from a negative impression of institutional care, a negative public opinion of residing in an elder care institution, poor adjustment to institutional life, and reluctant admission. However, not all sources of stress are visible. Some stressors may be invisible or unidentifiable due to elderly Taiwanese' self-discipline coupled with accumulated experiences that cause them to conceal their own perception of stress, perceived stigma caused by being institutionalized that leaves the elderly person feeling dishonored and hiding the truth of their feelings, and passive-aggressive maneuvers that relate to coping style. On the other hand, the deterioration of physical functional capabilities in the elderly requires a huge amount of dependent care in daily activities. This is a visible source of stress because it may result in a higher risk of their being institutionalized. Nevertheless, when institutionalization is inevitable and becomes a stress to the disabled elder, this stress may consequently lead to psychological distress and a lower quality of life.

According to Cohen and Wills' model, stress-buffering of social support may occur at the appraisal process when a person perceives an event as being stressful. At this juncture, buffering can prevent a stress response. This assumption raises the question about whether the degrees of willingness to be and to remain institutionalized affects the level of an elder's perception of stress, whether the length of stay in an institution affects the degree of an elder's perception of stress, and whether institutionalized aged parents modify their filial responsibility expectations to adjust to the reality of institutionalization and therefore reduce their stressful transition.

Although no sufficient evidence indicates the correlation between stress levels and the degrees of willingness to be and to remain institutionalized and the length of stay in an

institution, cultural factors can become a stressor and generate negative mental health has been described in the above section. This should be a critical concern for advanced studies. Therefore, willingness to be institutionalized and willingness to remain institutionalized are assumed as a potential stressful event. During the appraisal process of being institutionalized, adjusting an individual's filial responsibility expectations in accordance with the actual situation is a way to help the elder experience a better life in the institution. An institutionalized elder who has a higher expectation of filial responsibility of his/her children may have a higher unwillingness to be/remain institutionalized. Failure to adjust individual expectations of filial responsibility after institutionalization may lead to a higher perception of stress. Thus, different degrees of an elder's willingness to be/remain institutionalized and modifying elderly individual's expectations of filial responsibility may affect his/her perception of stress.

Moreover, the length of institutionalization may function as another stressor. The perception of stress can either diminish or remain unchanged throughout the length of one's stay in an institution. Of course, in keeping with the gist of this study, the relationship between the length of stay in an institution and the perception of stress may be moderated by adjusting expectations of filial responsibility.

In this study, the links between an elder's willingness to be/remain institutionalized, the length of stay in an institution, perceived stress, and the elder's filial responsibility expectation are derived from the propositions detailed above. All individual characteristics are hypothesized to have an influential effect on the elder's perception of stress during the appraisal process, thus depending on specific quality of these factors in an individual care, possibly resulting in depression. Hypothetically, elder's filial responsibility expectation intervenes as a moderator to

affect the strength of the relationship between the elder's willingness to be/remain institutionalized and the elder's perception of stress as well as the relationship between the length of stay in an institution and the elder's perception of stress.

Lastly, social support may intervene between perception of stress and consequent health effects based on Cohen and Wills' model of the stress-buffering effect. Socially supportive activity is designed as an intervention of social support in accordance with actual social activity in elder care institutions that takes into consideration cultural factors. Heller, Swindle, & Dsenbury (1986) have stated what the relationship is between facets of social support, coping, and health outcomes through social activity. For them, social activity is "to involve social support if it is perceived by the recipient of that activity as esteem enhancing or if it involves the provision of stress-related interpersonal aid (p. 467)." In stress-related interpersonal transactions, network members provide cognitive-emotional and instrumental aids which facilitate coping processes. The authors stated that social activity per se does not affect health. In other words, how an individual perceives and appraises social activity and the functions served by that activity determine health and mental outcomes, future social interactions, and support functions of the individual.

The links between perceived stress, participation in socially supportive activity, and depression are derived from these propositions. Among institutionalized elders, participation in socially supportive activity is hypothesized to have a function for the elderly residents as an external buffering mechanism of coping with the stressful transition. Purposefully organizing social support activity as a buffer alleviates the stress of transitional events on mental health through perceived supportive functions. When a network member appraises a need in an elderly

resident to adapt to a completely new life in an institution or when an elderly resident has a tendency toward mal-adaptation, socially supportive activities are carried out to help the elderly resident to cope with such changes. In other words, an elderly resident intentionally participates in activities once he/she perceives a need to assist him/herself to face institutionalization.

Elderly residents participate in activities to generate acceptance of being cared for in an institution rather than at home. Network members also participate to facilitate such acceptance. Therefore, an institutionalized elder who participates in socially supportive activities receives and perceives emotional and instrumental supports and social companionship. A reduction in psychological distress and negative response in mental health may result from good adaptation and perceived support during or after participating in socially supportive activities.

Stage Three: Self-transcendence

In stage 3, self-transcendence is the major construct as well as the major concept. The theory of self-transcendence is added to explain its relationship to perceived stress as a source of vulnerability and the influence of socially supportive activity on self-transcendence and depression.

Reed's Theory of Self-transcendence

A middle range theory of self-transcendence developed by Dr. Reed (1991a, 2003) is reviewed and incorporated into the integrated theoretical model. It fits with the aims of this study because it is based on psychosocial and nursing theories and has been widely applied to examine the relationships between self-transcendence, mental health and well-being in western countries, but it has not been widely applied in Eastern countries. Reed's theory is derived from multifaceted theories coupled with empirical evidence (Reed, 1991a).

Self-transcendence is defined as a major psychosocial resource of developmental maturity which allows a person to expand self boundaries intra-personally through introspective experiences and awareness of one's philosophy and values, inter-personally by reaching out to others and interacting with one's environment, temporally by integrating past and future experiences to enhance the present, and trans-personally related to religious beliefs (Reed, 1991a; 2003). The assumptions of the theory state that self-transcendence is a developmental phenomenon in human nature. Human beings are pandimensional and coextensive with their environment (Reed, 2003). Self boundaries fluctuate in a dynamic interaction with human health and environment throughout development. A person has full potential to expand self-boundaries to enhance well-being in later adulthood (Reed, 2003).

Self-transcendence develops into a salient pattern when an individual has increased awareness of their own mortality through advanced age or life-threatening events. Increased levels of vulnerability increase levels of self-transcendence. Well-being is "a sense of feeling whole and healthy," "a correlate and an outcome of self-transcendence" (Reed, 2003). Greater self-transcendence is related to a better sense of well-being. As self-transcendence relates to well-being, personal and contextual factors and their interactions influence the process of self-transcendence (Reed, 2003). Figure 3 demonstrates the relationships of vulnerability, self-transcendence, and well-being. Revealed through empirical evidence which has shown that self-transcendence is inversely related to depression (Reed, 1991a, Klaas, 1998; Ellermann, et al., 2001). Self-transcendence refers to a developmental resource that plays a preventive role to decrease levels of depression (Reed, 1986). To facilitate self-transcendence, the key component

is the sense of connectedness and wholeness within the self and with one's environment, that is, the perception of human beings as open systems (Reed, 1991b).

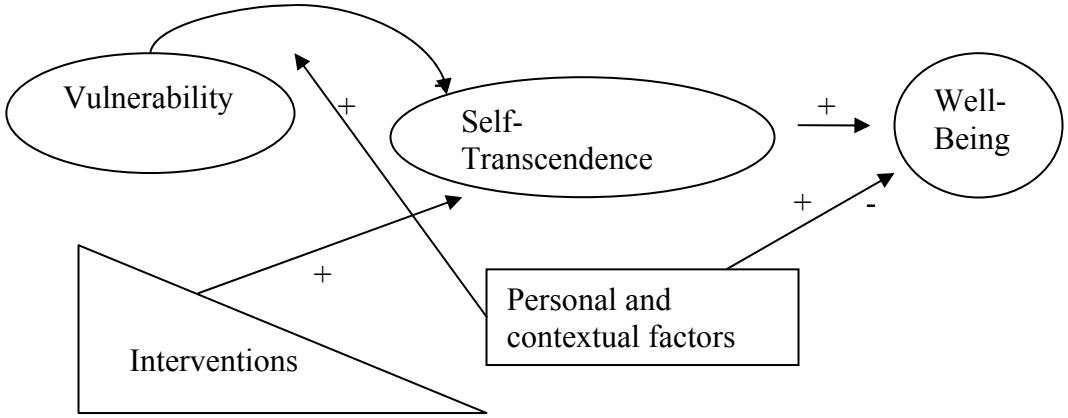


FIGURE 3. Model of Theory of Self-transcendence (Reed, 2003)

Theory of Self-transcendence in the Theoretical Framework

Self-transcendence acts as an inward mechanism and as a developmental resource for managing the vulnerability of placement in an elder care institution by utilizing personal wisdom. An elderly person gains his/her wisdom from accumulated life experiences across different developmental stages of life. This is an idiosyncratic asset. This wisdom generates the essential capability to discern what situations are beneficial or detrimental to successfully survive. Wisdom also helps the elderly to create their own philosophy toward transitional life. When an elderly individual has an increased awareness of vulnerability due to residing in an elder care institution or is aware of the risk of being placed in the institution, he/she may intentionally attempt to protect him/herself from being involved in a vulnerable situation through changing his/her philosophy late in life. Among traditional elderly Taiwanese with a high cultural expectation of aged care at home, overcoming placement in an elderly care institution is

not easy. Violating cultural expectations and personal residing preferences may cause stress and increase the risk of developing depression.

Self-transcendence helps self- expansion in modifying attitudes toward a new life in an institution, causes re-evaluation of actual institutional life through reciprocal interaction with network members within the available network resources, and facilitates the rearranging of future goals within institutionalization. Active participation in socially supportive activities allows stressed elderly residents to realize their capabilities to extend self-boundaries. Failure to do go through this process may lead to a higher incidence of depression. These propositions naturally lead to the following research questions: Whether the level of an elder's perceived stress induces self-transcendence to help reduce the incidence of depression? Whether self-transcendence mediates effect of perceived stress on depression? How participation in socially supportive activity facilitates such self-transcendence against depression?

It is thus hypothesized that the amount of stress an elderly Taiwanese residents experienced is directly related to the level of self-transcendence. It is hypothesized that self-transcendence has an inverse relationship to depression. When institutional transition is appraised as a stressor, self-transcendence plays mediating role between an elder's perception of stress and depression. Active participation in socially supportive activity may decrease the amount of stress through helpful supportive behaviors during interpersonal interactions and may increase an individual's capability, or the self-transcendence to expand interpersonal and intrapersonal boundaries. As a result, the improved relationship between perceived stress and self-transcendence decreases the incidence of depression. Therefore, the amount and quality of

participation in socially supportive activity is hypothesized to moderate the strength of the relationship between perceived stress and self-transcendence.

Stage Four: Depression

Depression is the major construct on stage 4 and the outcome variable in this study. Stages and arrows denote a direction of causality. One straight line ending in an arrow from one concept to the next represents a causal direction that has a direct effect on the proposed concept. A concept that has more than one such line to the next concept, that is, one that shows multiple paths, represents an indirect effect between the concepts. A positive sign indicates that the predicted concept will be changed in the same direction as the other predicting concepts. A negative sign represents that the predicted concept will be changed in the opposite direction of the other predicting concepts.

It is proposed that the depression of stage 4 is predicted by the self-transcendence of stage 3, the perceived stress of stage 2, and the institutionalization histories and a cultural factor of stage 1 (page 4). The institutionalization histories on stage 1 have positive or negative direct or indirect effects on depression. An elder's acceptance of institutionalization, including an elder's willingness to be institutionalized and an elder's willingness to remain institutionalized, and length of stay in an institution of stage one have a negative direct effect on an elder's perception of stress. An elder's expectation of filial responsibility changes the strength of the relationship between the degree of willingness to be institutionalized, the length of stay in an institution, and perceived stress. It is also proposed that the perceived stress of stage 2 has an inverse relationship to the self-transcendence of stage 3. When an elder experiences stress from institutionalization, socially supportive activity is proposed to be a moderating effect on self-

transcendence. It is proposed that a stressed elder who actively participates in socially supportive activity will experience significantly decreased stress levels and increased self-transcendence. It is proposed that the self-transcendence of stage 3 has an inverse relationship to the depression of stage 4. Self-transcendence is proposed as a mediator on depression.

Research Hypotheses

In the hypothesized causal model, institutionalization histories, perceived stress, and self-transcendence are the independent variables. Depression is the dependent variable. An elder's expectation of filial responsibility is a moderator to influence the strength of relationships between the degree of willingness to be institutionalized and perceived stress and between the length of stay in an institution and perceived stress. Socially supportive activity is another moderator which intervenes to influence the strength of relationship between perceived stress and the level of self-transcendence. Individual characteristics will collect as demographic data to describe the sample.

Stage Two - Social Support

Hypotheses for social support include:

1. The lower the degree of acceptance of institutionalization reported by an elder, the higher the level of perceived stress;
2. The shorter the length of stay in the institution, the higher the level of perceived stress by an elder;
3. An elder's expectation of filial responsibility is a moderator that influences the strength of the degree of acceptance of institutionalization-perception of stress relationship; and

4. An elder's expectation of filial responsibility is a moderator that influences the strength of the length of stay in the institution-perception of stress relationship.

Stage Three - Self-transcendence

Hypotheses for self-transcendence include:

1. The higher the level of perceived stress reported by an elder, the lower the level of self-transcendence; and
2. The greater amount of participation in socially supportive activity moderates the strength of a negative relationship between perceived stress and self-transcendence.

Stage Four - Depression

Hypotheses for depression include:

1. Perceived stress has a direct positive relationship with depression;
2. The degree of acceptance of institutionalization has a direct negative relationship to depression;
3. The length of stay in the institution has a direct negative relationship to depression;
4. Self-transcendence has a direct negative relationship to depression; and,
5. Self-transcendence mediates between perceived stress and depression.

Summary

The causality of developing depression is multifaceted. Cultural factors are an important contributory factor for depression. Yet, less attention has been paid to cultural factors other related causes such as individual physical disabilities, impaired cognition, and environmental conditions. When the cultural factors are incorporated into models to correlate with leading causes of depression, the causal relationships become more complex. In Taiwan, placing an aged

parent into an elder care institute violates a social norm. Additionally an aged parent's willingness to change living arrangements in this critical developmental phase of life requires special consideration. As a consequence, the cultural violation may contribute to depression in the institutionalized Taiwanese elder. Elders who are not willingly institutionalized, or who experience a shorter length of stay in an institution may be at risk for increased stress. In contrast, support from family members and from the elder's networks may become an important force to prevent depression. While diverse socially supportive activities are designed to enrich the psychosocial health for the institutionalized elders, the actual function and mechanism of socially supportive activities are not well understood. To improve understanding, theories of social support focused on stress and coping perspectives and Reed's theory of self-transcendence should be integrated with cultural factors to explain possible correlations to depression. Both theories have been discussed, as well as pertinent Chinese cultural factors that may lead to an increased risk for developing depression.

CHAPTER TWO: REVIEW OF LITERATURE

The relevant literature was reviewed in this section. First, the model of elderly health care services, characteristics of elder care institutions, and risks of institutional placement in Taiwan are introduced. The negative impact that relocating to an institution has on psychological health including the incidence of depression is addressed. Next, literature which identifies the different expressions of depressive symptoms between the West and Taiwan demonstrate the problem of underdiagnosed depression in elder care institutions. Current treatments of depression in Taiwan's elderly care institutions are reviewed in an effort to provide the new direction of treatment for institution-related depression. Further, the relevant literature of filial piety is reviewed. In addition, the relationships between social support and depression, and between social support and social activity are examined to indicate the importance of socially supportive activities to mental health in elder care institutions in Taiwan. A review of current instruments measuring institutional social activity is examined to indicate the necessity of a new instrument for assessing quantity and quality of socially supportive activities in elder care institutions. Finally, the relationship between self-transcendence and depression is reviewed.

Models of Elderly Health Care Services in Taiwan

Three models of long-term care services are provided to meet the needs of dependent elders in Taiwan. These include community-based, home-based, and institution-based care. In community-based care, services include medical care, nursing care, and personal care such as adult day care. Home-based care provides care in the dependent elder's home, such as home-care nursing. Lastly, institution-based care provides care in nursing facilities and care centers rather than in the elder's home. The institution-based care provides 24-hour skilled nursing services,

living assistance, and housing services to those who may require more care than families or communities can provide (Yang, 2002). In the proposed study, institution-based care was the focus. In general, institution-based care includes two types of facilities including hospital-based/freestanding nursing homes and community-based institutional facilities (Lin & Yin, 2005). Although institutional facilities differ in costs and proximity to the elders' home, elderly care services provided are basically similar. Community-based institutional facilities are generally less expensive and closer to the elder's original home than nursing homes (Lin et al., 2005). In the proposed study, both types of facilities were asked to recruit participants due to the similarities in daily activities and to facilitate recruiting a wide range of dependent elders, thereby increasing the generalizability of the findings. The term "elder care institution" was used throughout the study. An elder care institution was defined as a long-term care facility. It included various types of nursing homes and community-based institutional facilities, for instance skilled nursing homes, intermediate care nursing homes, and senior homes/centers, that provided 24-hour nursing services, personal living assistance, housekeeping, and security to those senior residents who have long-term care demands to maintain their functional status.

Characteristics of Elder Care Institutions in Taiwan

The vast majority of elder care institutions are for-profit and private-owner organizations. The occupancy rate of elder care institution beds is approximately 70%. Among institutional residents, the most common diagnoses are hypertension, stroke, and dementia (Yeh, Sehy, & Lin, 2002; Tsai, 2006). The average number of residents in an elder care institution is 37.9 residents with an average of five residents per room, while there is limited privacy, there are also increased opportunities to interact with other residents as a source of support. The partnership

pattern of residential care consists of one or two registered nurses with two to five nursing aides per shift to take care of residents. In addition, the ratio of registered nurses to elderly residents is 1 to 7 (Yen, et al., 2002).

Most institutions do not hire a trained activity/recreational coordinator or an occupational therapist to conduct the activities for institutionalized elders. Social workers or nursing administrators are typically responsible for designing or carrying out activities. By law, a licensed, full-time social worker is required in a 50-to-100-bed long-term care facility; an additional social worker is needed for every additional 100 beds. In small-sized long-term care facilities, a part-time social worker is required for at least 2 working days (Ministry of the Interior, 2007). However, full-time social workers are not available in most nursing homes because they tend to be small-sized institutions (under 50 beds). Thus, for the most part, nursing administrators design activities. Registered nurses and especially nursing aides are primarily in charge of activity with elderly residents.

Risks of Institutional Placement

Factors contributing to institutionalization for older people in Taiwan are a little different than those in Western countries. They share the following common risks for institutional care admission: advanced age, increased physical disability; increased dependence due to greater functional impairment; higher cognitive impairment; dementia; increasing frailty due to physical deterioration resulting from the effects of chronic medical conditions such as stroke, Parkinson's disease, hypertension, diabetes, fracture, and falls; lower household income; lower educational level; unmarried status; bowel and urinary incontinence; and pre-admission residence in a nursing home (Aarsland, Larsen, Tandberg, & Laake, 2000; Banaszak-Holl, Fendrick, Foster,

Herzog, Kabeto, et al., 2004; Bharucha, Pandav, Shen, Dodge, & Ganguli, 2004; Eaker, Vierkant, Mickel, 2002; Friedman, Steinwaches, Rathouz, Burton, & Mukamel, 2005; Gaugler, Duval, Anderson, & Kane, 2007; Liu et al., 2001; Mustard, Finlayson, Derksen, & Berthelot, 1999; Shyu, et al., 2002; Wang, Mitchell, Smith, Cumming, Leeder, 2001; Harris, et al., 2006). In Taiwan, however, elderly people with difficulties in activities of daily living (ADL) have 2.5 times the risk for nursing home admission (Liu, et al., 2001). While depression has been found to be a strong predictor of institutionalization in Europe and the United States (Onder, Liperoti, Soldato, Cipriani, Bernabei, et al., 2007; Harris et al., 2006), this association has not been explored in Taiwan. Studies have also shown that social support moderates the impact of stress on the risk of institutionalization in the West (Pearlman & Crown, 1992). Again, this possibility has not been properly tested in Taiwan.

Additionally, in Western countries, it has also been found that if elders own their homes; they are less likely to be admitted to an elder care institution (Wang, et al., 2001; Harris, et al., 2006). Unfortunately, those who live alone are more likely to be institutionalized (Pearliman, et al., 1992; Aarsland, et al, 2000). In contrast, in Taiwan, the amount of caregiver burden, accessibility of nursing home facilities for family caregivers, and perceived public opinion are more strongly associated with institutionalization (Chiu, et al., 1998; Kao, 2003; Kao, et al., 2004). Liu and Tinker (2001) indicated that 80% of elder's relatives (including a son/daughter-in-law) took care of an elderly person for an average of two to three years prior to admission. The remaining 20% of elderly relatives gave up care in the first six months because of the elder's increasing frailty and the caregiver's feelings of exhaustion. Despite cultural differences between Western and Eastern countries, in both areas, it is clear that family caregivers play a significant

role in the decision-making process to institutionalize disabled, aged parents. The inclinations, resources of the family caregiver may be the primary determinate regarding the timing for placing an elder into an institution.

Characteristics of Institutionalized Residents in Taiwan

Stroke and dementia are the most common primary diagnoses of institutionalized residents (Yeh, et al., 2002, Yen, Lin, & Lo, 2003). Fifty one to 75% of institutionalized residents had some degree of cognitive impairment and 47.7% of the residents had both impaired cognition and impaired performance in activities of daily living (Wu, Ke, Su, 1998; Yeh, et al., 2002). Approximately fifty percent of institutionalized residents required moderate functional assistance (Yeh, et al., 2002, Yeh, et al., 2003). However, older residents in rural long-term care facilities had better functional status, better motor abilities, better cognitive status, and more financial support from their children than those in urban areas (Lin, Wu, Hsiung, Hu, Hsieh, et al., 2004).

Impact of Institutional Relocation on Psychological Health

A positive or negative adjustment to institutional life can affect the psychological health of relocated elders. Negative adjustment also relates to decision making process and one's cognitive appraisal of relocation. Studies on outcomes of relocation using the Relocation Appraisal Scale in terms of five appraisal dimensions (including harm/loss, threat, challenge, benign, and positive) indicated that relocated elders who appraised relocation as a threat had poorer post-relocation adjustment and poorer psychological health than those who appraised relocation as challenging, benign, or positive (Armer, 1993; Gass, Gaustad, Oberst, & Hughes, 1992; Keister, 2006). Likewise, relocated elders who appraised greater harm/loss associated with

relocation had an increased incidence of depression (Keister, 2006). Better preparation and planning for transition prior to relocation may reduce adverse consequences of relocation such as depression (Meehan, Robertson, & Vermeer, 2001). Hodgson and his colleagues (2004) examined affects in response to voluntary nursing home relocation. Findings showed that frail older adults who voluntarily entered a nursing home and undertook move-preparation activities such as receiving information about the facility, seeing photographs of the facility, participating in meetings for residents and family members, and being encouraged to talk about feelings of moving were less likely to experience depression.

Unfortunately, a qualitative study demonstrated that most relocated elders had no real choice about being institutionalized and did not volunteer to be relocated. Elders felt that institutionalization meant losing everything with significant negative implications such as the "end of the line" (Nay, 1995). Another qualitative study compared the experiences of older adults during the transition to nursing home life when the admission was unplanned versus planned (Wilson, 1997). Older adults whose admission was unplanned experienced more emotional responses such as crying and reports of lonely feeling, spent more time managing emotional responses to the nursing home, and took longer to adjust and make the transition than those who planned the move. Furthermore, establishing new social networks in the nursing home helped institutionalized elders shorten the process of adjustment. Likewise, institutionalized elders who had higher levels of perceived social support from their family and fellow residents were able to better adjust after relocation (Armer, 1993). The significance of social support in successful relocation has been shown in many studies (Armer, 1993; Keister, 2006). This empirical evidence strongly suggests that a significant relationship between an older adult's

willingness to be institutionalized and depression; the effect of an elder's willingness to be institutionalized on actual social support received, and perceived have significant value.

Risks for Depression Among Institutionalized Elders

Physical, psychological, and socioeconomic factors all contribute to making Taiwanese institutionalized elders vulnerable to depression. Studies have shown that Taiwanese institutionalized elders with depression had poorer physical health, less functional ability, more cognitive impairment, greater pain, poorer communication, more visual-impairment, more medical illness, lower perceived and received social support, greater loneliness, poorer perceived adequate income, and lower educational level than their non-depressed cohorts (Chu, 2005; Hou, 2004; Lin, et al., 2005; Tsai, et al., 2005; Tsai, 2006). In addition, female elderly residents had a higher risk for depression than male residents (Lin, et al., 2005). Residents with a longer length of residency were less depressed than those who were in a nursing home for a shorter period (Lin, Wang, Huang, 2007). Elderly residents who received support from their daughters and friends, more emotional support, and more social integration revealed a lower incidence of depression (Yeh, 1998). In short, all these risks of depression in Taiwan are consistent with same risks that have been shown in the West.

Additional risks for Taiwanese institutionalized elders include type of institution, quality of sleep, fall risk, and dysphagia (Chou, Yeung, & Wong, 2005; Huang, 2003; Lin, et al., 2005). Elderly residents living in intermediate-care facilities had greater depressive symptoms than those living in skilled nursing facilities (Lin, et al., 2005). Perceived health status, cognitive function, satisfaction with social support, educational level, loneliness, and social functioning have been found to be the best predictors of depression in elderly care institutions (Chu, 2005;

Hou, 2004; Lin, et al., 2005; Liu, 2004; Yeh, 1998). Among the various risk factors of depression, biological physical changes related to aging and demographic disadvantages can not be changed through any nursing intervention. However, social support, as a nursing intervention, can be used to reduce depression through strengthening social networks and improving social functioning.

Other risk factors for depression in Taiwan as well as western countries, includes under-nutrition (Mago, Bilker, Have, Harralson, Streim, et al., 2000); lower locus of control; lower self-esteem; fewer residents as close friends; lower perceptions of environmental support and cohesion; lower level of assertive behavior (Commerford & Reznikoff, 1996; Rosen, Rogers, Marin, Mulsant, Shahar, et al., 1997; Cabness, 2003; Fessman & Lester, 2000; Eisses, Kluiter, Jongehelis, Pot, Beekman, et al., 2004; Segal, 2005; Pipinelli, 2006); different types of personality (Eisses, et al., 2004); more losses including loss of home, belongings, independence, and significant others; and more stressful life events (McCurren, Dowe, Rattle, & Looney, 1999; Moos, Schutte, Brennan, & Moos, 2005).

Differentiation of Depressive Symptoms Between the West and Taiwan

Missing differentiation of depressive symptoms in older adults can cause under-diagnosed depression. Under-diagnosed depression appears in elderly institutions both in the west as well as in Taiwan (Bell & Goss, 2001; Boyle, Roychoudhury, Beniak, Cohn, Bayer, et al., 2004; Lin, et al., 2005; Teresi, et al., 2001). Possible explanations of under-diagnosed depression may include failure to recognize atypical symptoms of geriatric depression by health professionals, mistaken beliefs about aging, and lack of available significant screening tools for geriatric depression (NIH, 1992; Suen, 2004; Wada, Ishine, Sakagami, Kita, Okumiya, et al.,

2005). Regardless of cultural differences, depression in later life frequently coexists with multiple chronic diseases and physical disabilities that correlated with advanced age (NIH, 1992). Somatic symptoms of chronic medical illness often overlap with symptoms of depression (Schwenk, 2002). Somatic and cognitive symptoms in depressed elderly were commonly translated into physiological symptoms which tended to be reported more than affective symptoms and not openly felt (Alexopoulos, Buckwalter, Olin, Martinez, Wainscott, et al., 2002; NIH, 1992). Rather a depressed mood, a lack of feeling or emotion, a loss of interest, inability to feel pleasure in activities, and a sense of hopelessness frequently displayed in clinical characteristics of depression as was called as "depression without sadness" (Alexopoulos, et al., 2002; Gallo & Rabins, 1999).

In addition to the above commonly leading to under-diagnosed causes, however, cultural factors should be considerably significant factor in making a diagnosis of depression. Cultural factors influence the expression of depressive symptoms. In Taiwan, elderly individuals are more likely to manifest expressions of somatic symptoms of depression and mask psychological and emotional symptoms of depression due to cultural values of self-control and self-sacrifice to maintain social harmony (Krause & Liang, 1991; Wu & Kelly, 2007). Expressing physical symptoms caused by physical illness that is beyond one's control is socially acceptable in Chinese culture (Mak & Zane, 2004). Therefore, when conducting depression-related studies among Taiwanese elders, the instrument to measure depression should be carefully selected.

Current Treatment for Depression in Taiwan's Elder Care Institutions

A literature review on treating depression in institutionalized Taiwanese elders was conducted to identify the need for treating depressed elders from a nursing perspective. Since the first

registered nursing home was established in 1990, there has been an increased interest in depression-related studies in the field of gerontological care. In the past decade in Taiwan, there have been a total of 16 depression- related, descriptive studies, including five Chinese master theses and eleven articles published in English. Table 2 summarizes the published studies on depression in long-term care facilities/nursing homes in Taiwan from 1997-2007. Findings indicated all studies are not theory-driven studies. Without using theory as a guide to formulate research questions, define concepts, or understand relationships between concepts, these research findings are merely a description of an interesting phenomenon rather than a theory driven understanding of underlying factors that contribute to the situation (Sidani & Braden, 1998; Verran, 1997).

Second, only 58.3% of depressed residents got a prescribed antidepressant (Lin, et al., 2005). In other words, 50% of depressed elders remained untreated with antidepressants. Even though a 12-week course of treatment with antidepressants has shown to improve depression and enhance quality of life of older adults (Lian, 2006), no study has been done on depressed elders in Taiwanese institutions.

Third, the only non-pharmacological treatment for reducing depression for institutionalized elders was a psychosocial intervention that consisted of reminiscence therapy (Chao, Liu, Wu, Jin, Chu, et al., 2006; Hsiao, Yin, Shu, Yeh, & Li, 2002; Wang, 2004, 2005; Wang, Hsu, & Cheng, 2005). Even though many other non-pharmacological treatments or interventions, such as supportive group therapy, cognitive-behavioral therapy, and problem-solving therapy, have been shown to decrease depression (Bharucha, Dew, Miller, Borson, & Ill, 2006; Frazer, Christensen, & Griffiths, 2005; Pinquart & Sörensen, 2001), none of these

TABLE 2. Publication on Depression and Social Support in Long-Term Care Facility in Taiwan

Author (Year)	Purpose	Samples	Instruments	Findings
Yeh, C. L. (Chinese) (1998)	To investigate the relationship between social support, physical health, and depression in self-paid care homes	120 residents in self-paid care homes	Social Support Scale Geriatric Depression Scale	The means of son-daughter support was the highest at 14.87; relative support was lowest at 11.14, social worker support at 11.29 Ranking order of the means of social support functions: informational support, social integration, emotional support, and tangible support. Moderate satisfaction of social support The mean of depression scores was 14.37. 94.2% elderly were lower depression. Neg. relationship between depression and support from daughter and friend, emotional support, and social integration.
Huang, W. L. (Chinese) (2003).	To explore problems of depression and sleeping quality of elderly residents	200 residents in two public elderly homes	Geriatric Depression Scale Social Support Scale	Neg. relationship between depression and sleeping quality Neg. relationship between physical functions and depression Neg. relationship between depression and satisfaction of social support and between depression and support network. Higher variety of chronic disease had higher tendency of depression. Self-awareness, satisfaction of living environment, physical functions, and social support network totally explained 37% variance of depression. Residents with long sleeping latency were 1.65 times more likely to have depression than those with short sleeping latency. Sleep quality is predictive to depression.

TABLE 2. - *Continued*

Author (Year)	Purpose	Samples	Instruments	Findings
Lee Y. J. (Chinese) (2003)	To explore the relationships among the self-esteem, social support, and hope of the elderly	100 residents in two government-funded living facilities in Kaohsiung and Pingtung cities	Social Support Scale Self-Esteem Scale Health Hope Scale	Respectful and informational supports from staff were the most and socialized and emotional supports were the least. Respectful and informational supports from family were the most and tangible and emotional support were the least Respectful and socialized supports from other residents were the most and tangible and emotional supports were the least.
Hou, H. M. (Chinese) (2004)	The relationships among depression, social support, and loneliness of the elderly living in long-term care facilities	100 elders from 7 long-term care facilities in the Taichung county and Taichung city	Geriatric Depression Scale Short Form Social Support Scale Revised UCLA Loneliness Scale.	Sig. differences in depression between different groups of having chronic illness or not and among different groups of institutionalized reasons. Neg. relationship between depression and loneliness. Neg. relationship between depression and support from relatives and friend and between depression and satisfaction of support Loneliness and having chronic diseases were the major predictors of depression.
Chou, K. L., Yeung, F. K. C., & Wong, E. C. H. (English) (2005)	To explore the relationship between fear of falling and depressive symptoms as well as the role of participation in physical activity and fall efficacy in the linkage between the fear of falling and depression.	100 residents living in nursing homes	GDS Short Form	Depression sig. associated with self-rated health, using a walking aid, the fear of falling, fall efficacy, and level of activity

TABLE 2. - *Continued*

Author (Year)	Purpose	Samples	Instruments	Findings
Liu, H. C. (Chinese) (2004)	To explore the relationships between health status and depression of older persons residing in long-term care facilities	166 residents in 11 long-term care facilities in Changhua.	Unknown	81% of residents with depression The participants with severe depression had more body pain, role limitation due to emotional problems, general health, vitality and social function than those without depression. No sig. difference in depression among different groups of payment method, gender, educational level and marriage status. Social functions and role limitation due to physical problems accounted for 38.8% of the variance in depression.
Chu, L. C. (Chinese) (2005)	Factors influencing depression among elderly residents in nursing homes	111 residents in 12 nursing homes in northern Taiwan	Social Support Scale Geriatric Depression Scale	44.1 % prevalence of depression Lower education level, worse functional status, had pain, had severe current pain, had pain to interfere with their mood and sleep, less demand of social support network, lower participation in social support, received lower social support, less satisfied with all dimensions of social support were more likely to have depressive symptoms. Sig. predictors of depressive symptoms were the education level, the functional status, and the pain situation.

TABLE 2. - *Continued*

Author (Year)	Purpose	Samples	Instruments	Findings
Lin, L. C., Wang, T. G., Chen, M. Y., Wu, S. C., & Portwood, M. J. (English) (2005)	To investigate the prevalence and risk factors of depressive symptoms in elders	267 depressed elders in 9 skilled nursing facilities and 9 intermediate-care facilities where having a resident population of 30 or over	SPMSQ GDS (cutoff point at 5) BI	52.05% prevalence of depression Depressed elders had less functional ability, more cognitively impaired, and greater swallowing than non-depressed elders. 58.3% of depressed residents received a prescribed antidepressant. After controlling age, gender, duration of institutionalization, and mental status, functional status, impaired swallowing, and type of institution were sig. associated with depressive symptoms.
Tsai, Y. F., Chung, J. W. Y., Wong, T. K. S., & Huang, C. M. (English) (2005)	To explore and compare the prevalence and risk factors for depressive symptoms among elderly residents of nursing home in Taiwan and Hong Kong	Random sampling from 8 nursing homes in each region 150 elders from Taiwan and 214 elders from Hong Kong	GDS Short Form (cutoff point at 5) Social Support Scale (Hsiung, 1999)	43.3% prevalence of depressive symptoms Females have a higher depressive tendency than males. Elders educated at the junior high school level or above have fewer depressive symptoms. Satisfaction with living situation, perceived health condition, perceived income adequacy, functional status, cognitive status, and satisfaction with social support have sig. neg. correlation with depressive symptoms. Gender, satisfaction with living situation, perceived health condition, and perceived income adequacy were predictors of depressive symptoms.

TABLE 2. - *Continued*

Author (Year)	Purpose	Samples	Instruments	Findings
Tsai, Y. F. (English) (2006)	To explore self-care management strategies and risk factors for depressive symptoms among elderly nursing home residents in Taiwan	220 stratified random sampling recruited form 9 of 174 nursing homes	GDS Short Form (cutoff point at 5)	55% of participants identified as depressed. 42% used self-care strategies to manage their depressive symptoms. 25 self-care management strategies identified. The most 5 frequently used strategies were take a walk, talk to friends, sleep, watch TV, and endure symptoms. Satisfaction with living situation and perceived health status significantly predicted depressive symptoms.
Tsai, Y. F. (English) (2007)	To determine the self-care strategies and risk factors for depressive symptoms among residents of public elder care homes in Taiwan	200 random sampling with 10% sample of the population of older persons recruited from 2 of 18 public care homes	Chinese version of the GDS Short Form (cutoff point at 8)	49% of participants identified as depressed. 93% used self-care strategies to manage their depressive symptoms. 37 self-care management strategies identified. The most 5 frequently used strategies were take a walk, watch TV, and talk to friend. Cognitive function, perceived health status, and osteoarthritis were significant predictors of depression.
Lin, Wang, & Huang (2007)	To examine the depressive symptoms of older residents at nursing homes and the relationship between their depressive symptoms and certain selected variables	138 older nursing home residents	Center for Epidemiological Studies Depression Scale Social Support Scale Chronic Condition Checklist Soci-demographic Inventory	Perceived health status and lack of social support from nurses, family, and roommates negative correlated with depressive symptoms. The number of chronic conditions positive correlated with depressive symptoms. Perceived health status, social support from family, number of chronic conditions, and length of residency explained 38.8% of the total variance in depressive symptoms.

Note. SPMSQ = Short Portable Mental Status Questionnaire. GDS = Geriatric Depression Scale. BI= Barthel Index. Sig.= Significant. Neg. = Negative.

therapies have been implemented or studied in Taiwanese elder care institutions. Depression may go untreated possibly because there is a lack of awareness of its prevalence in the institutionalized elderly, and there is a misconception that depression is a normal reaction to being relocated. Furthermore, in Taiwan, there is a shortage of available psychologists and therapists to implement psychosocial therapies.

Fourth, of all the studies, only two explored the strategies for managing depressive symptoms among institutionalized depressed older adults (Tsai, 2006; 2007). In Tsai's studies, the prevalent rate of depressed residents was 42-93%. Self-care strategies to manage depressive symptom were the most often used strategies. The top five self-care strategies in order were "take a walk," "talk to friends," "sleep," "watch TV," and "endure symptoms or don't think about it." Also, in the studies, seeking professional assistance or taking prescribed medication were the least frequently used strategies to manage depression. Empirical evidence explicitly reveals that depressed residents were more likely to use passive, inactive strategies rather than effective, active methods to manage their symptoms. More interestingly, depressed elders managed their symptoms by seeking support from friends, volunteers, or student nurses more than seeking support from children or other family members (Tasi, 2006; 2007). Surprisingly, this tendency does not follow the traditional values of Chinese culture. In Chinese society, the family system consistently serves in a crucial position and function during a time of need. Thus, the family has traditionally played the primary supportive role when a person encounters a vulnerable situation.

This evidence reveals that institutionalized elders obtain support from other institutional acquaintances who become as important as intimate family members. In other words, the

expansion of support resources from the kinship network to the non-kinship network is an additional source of support when dealing with depression among institutionalized elder. Therefore, it is vital to use more effective, available methods to deal with depression, for instance, providing more opportunities to increase social interactions via active participation in socially supportive activities and to examine the effects and effectiveness of these methods on depression.

Expectation of Filial Piety and its Impact

The concept of filial piety and the effects of social changes on filial piety have been clearly described in an earlier section. In a study to compare the impact of filial piety on intergenerational communication across cultures, findings revealed that both Asian and Western young people who perceived a normative obligation to provide parental care and financial support when their parents are older were more likely to do so (Gallois, Giles, Ota, Peierson, Ng, et al.,1999). Yet, Asian young people perceived a greater obligation to give practical support than did Westerners. Interestingly, Asian young people demonstrated looking after older adults and providing them financial support more than Westerners. But, Asian young people were less likely to respect, listen patiently, and maintain contact with their older adult's less than Western young people.

In addition, Asians perceived a higher expectation of filial piety from their family and non-family elders than Westerners. The level of elder's expectation of filial piety has shown an inverse association with health status and a relationship with gender (Seelbach, 1978). However, Dai (1995) examined the relationship between an elder's expectations of filial piety and well-being of parents among 150 Taiwanese community elders. Findings showed that no relationship

between expectation of filial piety and well-being existed. The possible reason to explain the discrepant findings might be the way the expectation of filial piety is constantly being adjusting (Dai, 1995). When a gap between parents' expectations and children's performance appeared, aged parents constantly lowered their expectations of filial piety to protect themselves from disappointment. Parents who are unable to make such adjustments might harm their own sense of well-being (Dai & Dimond, 1998). Dai, et al (1998) also suggested further relevant research about the impact of expectation of filial piety on health were needed.

The Relationship of Social Support and Depression

The relationships between social support and depression among institutionalized and community older adults in Taiwan have been studied. Studies with institutionalized elders showed that the higher levels of perceived and received social support, the lower the level of depression (Beatty, 1989; Cheng, 1998; Chu, 2005; Hou, 2004; Cummings & Cockerham, 2004; Huang, 2003; Lin, et al., 2007; Liu, 2004; Roberson, et al., 2003; Tsai, et al., 2005; Yeh, 1998). Social support is also an important factor in reducing the risk of mortality (Temkin-Greener, Bajorska, Peterson, Kunitz, Gross, et al., 2004). Two studies on the social support of elderly nursing home residents in Taiwan involved support resources from others than family members, including neighbors, roommates, nurses, nurse aides, and friends (Tsai, et al., 2005; Lin, et al., 2007). However, Lin et al. (2007) indicated that social support from nurses, family, and roommates had an inverse relationship with depressive symptoms. Previous studies narrowly defined resident's social network and did not include outside acquaintances such as volunteers, nursing students, and hospital ministry which are common social support resources in elder care institutions.

In addition, Lin et al. (2007) suggests that although the length of residence itself was not significantly associated with depressive symptoms, family social support was. When these two factors were entered to examine the predictive factors of depressive symptoms using stepwise regression analysis, family social support was a strong predictor of depressive symptoms. This result was explained in the previous discussion section as the contribution of the Chinese family value of filial piety. Social support was viewed as protective to prevent developing mental health problems, especially depression (Lin, et al., 2007). Yet, the mechanism of this protective function is not clearly explained. Though the cultural value of filial piety is recognized in this study, exactly how the elderly perception of filial piety affects depression and its effect on the process of received and perceived social support have not yet been explored.

Most studies examine the effects of social support on depression among Taiwan's institutionalized elders primarily focus on the relative contributing factors of depression (Table 1). The important role that social support plays in preventing depression is overlooked, especially when institutionalization is generally accepted as a stressor. Predominately, social support is measured by evaluating types (or functions) of social support such as tangible, emotional, informational, instrumental, and respectful support which elderly residents receive or perceive. Evidence indicated that support from daughters, relatives, and friends and satisfaction with social support and the support network has a negative relationship to depression among institutionalized elders (Hou, 2004; Huang, 2003; Lin et al., 2007; Yeh, 1998). Lee (2003) studied different types of received social support from facility's staff, family, and fellow residents. Findings demonstrated that support from family and staff were more likely to provide respectful and informational support than emotional support; while support given by fellow

residents tended to be respectful and socialized. Regardless of the different types of supportive functions offered by different support resources, the mechanism of social support on depression is remains inadequately understood.

Social Support in Elder Care Institutions

In elder care institutions, the process of social support can be enhanced by the resources that the network structure and social environment can provide. The network structure in an institution changes the initial home-based network, including the frequency of contacts with family members, friends, and residential network members; the degree of accessibility to other network members; and a homogeneous network of other residents. Networks comprise family-to-resident, staff-to-resident, resident-to-resident, and outside institutional acquaintance-to-resident networks. In addition, in the institutional setting, the social environment does not only involve the diverse sources of social support, but also provides multiple social stimulating opportunities through participation of institutional activities. Diverse sources of social support other than the family network consist of institutional staff, fellow residents, and acquaintances from outside the institution. Within elder care institutions, however, the support given and received from one resident to another resident creates a bond (Patterson, 1997). This bond can be achieved by interacting with fellow residents or outside institutional acquaintances and by enjoying participation in social activities. Thus, additional sources of support should not be ignored while assessing the influence of supportive functions on health.

Empirical evidence also indicates the importance of various networks to the institutionalized elders. Among institutionalized Taiwanese elders, friendship is as important as kinship in enhancing one's quality of life (Leung, Wu, Lue, & Tang, 2004). Carpenter (2002)

studied associated support networks and their contributions to the psychological well-being on nursing home residents. The majority of elderly nursing home residents had peer and staff support networks that were as large as or larger than their family support networks. There was a significantly negative relationship between perceived support from peers and depression and a significantly positive relationship between perceive support from peers and positive affect. In other words, nursing home residents who received more support from peers were less likely to be depressed and more likely to have positive affect. Likewise, support from family was more likely to be happier. Elderly nursing home residents who were satisfied with family and peer supports were more likely to have less depression and greater positive affect. Yet, satisfaction with staff support only correlated significantly to greater positive affect and did not correlate to less depression (Carpenter, 2002). Among assisted living residents, Cummings and Cockerham (2004) demonstrated negative relationships between depression and perceived social support. In their sample, the depressed elders were more likely to have lower satisfaction with the support of friends. Assisted living residents who perceived higher levels of social support and greater satisfaction with the support of friends, were less depressed. Given this evidence, it would appear that institution-related network members provide significant support, in addition to the family network, and subsequently affect mental health.

Power (1988) was the first researcher who used the conceptual model of social support process proposed by Heller et al. in a qualitative study to explain the process of social support in a long-term care institution. Findings include: 1) a larger social network does not necessarily provide greater support; 2) different types of network structures generate different meanings of planned activities for residents; 3) not all social activities are supportive, depending on how

meaningful the social activity is; and 4) resident-to-resident support is underestimated and seldom incorporated into a plan of care. In the study, coping strategies to alleviate stress include increasing outside contacts, sharing practical everyday concerns, and getting emotional support from making friends and phone-calling acquaintances. Moreover, residents with kin-centered networks focus strongly on family activities. They participate less in activities consequently and limit their opportunities for socialization.

Residents with an institution-centered only network are more likely to participate in activities to be entertained, to "kill time," and to reduce loneliness. These residents tend to be passive participants, drifting in and out of activities. Residents who tend to actively participate in activities as opportunities for socialization and productivity likely have balanced networks across residents, staff, kin, and outside friends (Power, 1988). Again, activities between fellow residents and with contacts outside the institution should be taken account of in any thorough study of the beneficial effects of socially supportive activities, regardless of culture. In addition, the role functional socially supportive activity plays in alleviating stress and its mental health consequences among institutionalized elders still remain to be investigated.

Relationship Between Social Support and Social Activity

The essential characteristics of social activity comprise social network and functions of social support. Terms often used to describe elderly participation in social activity are "social engagement" and "social interaction." The item "numbers and frequency of social contacts (or visits) by family, friends, visitors, etc.," as a proxy is often used to create the social engagement variable or social interaction variable as well as social support variable in diverse studies (Lewis, Kane, Cretin, & Clark, 1985; House, et al., 1982; Unger, Johnson, & Marks, 1997). Engagement

in social activity fosters a sense of support, an opportunity to interact to develop social relationships, and a mutual exchange of social support (Cummings, et al., 2004; Herzog, Ofstedal, & Wheeler, 2002; House, Robbins, & Metzner, 1982). Thus, both social activity and social support should be considered as one construct in examining its relationship to health.

Currently, studies show the positive effect of social activity on social support (Cummings, 2002; Fitzpatrick, Gitelson, Andereck, & Mesbur, 2005; Greaves & Farbus, 2006). Cummings' study among assisted-living residents (2002) indicated that participation in social activity significantly increases perceived social support and decreases depression. Especially, institutional residents who perceive social support from friendships resulting from a new activity (Fitzpatrick, et al., 2005). This evidence, again, clearly reveals the significance of how socially supportive activity benefits mental health. More relevant studies on socially supportive activity are needed to examine the causal relationship to mental health among institutionalized elders.

Beneficial Effects of Social Activity

In general, studies have shown a close correlation between the levels of social activity and elders' physical and psychological well-being. Those who appear to be more socially active, in other words, appear to have a better and healthier quality of life. Various studies, for instance, have shown a relationship between low levels of social activity and higher mortality (Glass, Mendes de Leon, Marottoli, & Berkman, 1999; Klumb & Maier, 2007; Lennartsson et al., 2001; Sun, Liu, 2006), increased functional decline (Unger, et al., 1997; Everard, et al., 2000), increased incidence of cognitive decline (Barnes, de Leon, Wilson, Bienias, & Evans, 2004; Yen, Yang, Shih, & Lung, 2004), poorer physical and psychological well-being (Faso, 1993; Kelly, McKenna, Parahoo, & Dusoir, 2001; Jenkins, Pienta, & Horgas, 2002; Lampinen, Heikkinen,

Kauppinen, & Heikkinen, 2006), and poorer quality of life (Jenkins, et al., 2002; Leung, et al., 2004). Nursing home residents who do not socially engage in activities are 1.4 times more likely to die than those engaged socially (Kiely, Simon, Jones, & Morris, 2000).

Actively engaging in social activities possibly mediates a protective effect on mortality through modulation of neuroendocrine reactivity (Seeman & McEwen, 1996) and promotion of healthy behaviors as a result of identifying ill-health behaviors within interpersonal relationships (Kiely & Flacker, 2003). The effect of social activity on mortality, however, diminished as age increases has been found in a study of mortality of the Chinese community (Sun & Liu, 2006). In other words at very old age, the greater the participation in social activities, the higher the risk of dying. The phenomenon of the elderly withdrawing from social activity at a very advanced age appears beneficial to their longevity; withdrawal may be considered an adaptive response to facing the changes of advanced age (Sun, et al., 2006).

Numerous studies also have shown the psychosocial advantages of social activity including enjoyment (Ejaz, Schur, & Noelder, 1997), a more satisfying life (Jang, Mortimer, Haley, & Borenstein, 2004), a more positive outlook (e.g. energetic, warmhearted, interested and happy) (Kurlan, Gill, Patrick, Larson, & Phelam, 2006; Meeks, Young, & Looney, 2007), a lower incidence of dementia (Wang, Karp, Winblad, & Fratiglioni, 2002), and a lower rate of depression (Adams, Sanders, Auth, 2004; Achterberg, Pot, Kerkstra, Ooms, Muller, et al., 2003; Glass, et al., 2006, Lampinen, et al., 2006; McGue & Christensen, 2007; Meeks, Young, & Looney, 2007; Morgan & Bath, 1998). Specifically, social engagement activity demonstrated a significantly protective effect on lowering depression among community-dwelling elderly cohorts (Fukukawa, Nakashima, Tsuboi, Niino, Ando, et al., 2004; Glass, et al., 2006). The

psychosocial mechanism of reducing depression may be explained as personal participation in activities improves one's mood as a result of the increased positive effects of pleasant events and a socially stimulating environment (Meeks et al., 2007).

However, the research of the effects of participating in social activities has on stress are controversial. Among community elders, Unger, Johnson, & Marks (1997) indicated that there is a protective effect of social interaction on health, but an individual's level of stress is not a factor in the level of social interaction. In contrast, negative life events, which can develop as a stressor for older people, may increase participating in social activity (Hillerås, Jorm, Herlitz, & Winblad, 1999). To date, little is known about the effect participating in socially supportive activities have on stress-related depression within the institutional environment. Advanced studies are needed to explain how the psychosocial mechanism of socially supportive activity affects the incidence of depression.

Contributors of Lower Social Engagement in Institutions

Depression is a barrier to social engagement (Achterberg, et al., 2003; Glass, et al., 2006). Depressive symptoms are negatively associated with social engagement activity (Glass et al., 2006). Those who are depressed are less involved in activities (Achterberg, et al., 2003) and less likely to attend different types of activities (Meeks, et al., 2007). Meeks and colleagues (2007) compared participation in activities between depressed and non-depressed nursing home residents. Results showed that depressed residents were more likely to participate in, be interested in, and enjoy organized group activities than non-depressed residents. On the other hand, non-depressed residents were more likely to participate in, be interested in, and enjoy informal group activities. However, personal characteristics such as age, gender, and educational

level are not related to the degree of involvement in social activities (Hillerås, et al., 1999; Lemke & Moos, 1989). Nursing home residents participated in activities that primarily interested them rather than to simply provide pleasure (Meeks, et al, 2007).

In addition, the characteristics of the facility, the resident's physical functioning, and the resident's cognitive status are significant contributing factors in activity involvement (Dobbs, Munn, Zimmerman, Boustani, Williams, et al., 2005; Hillerås, et al., 1999; Jenkins, et al., 2002; Kolanowski, Buettner, Litaker, & Yu, 2006; Lemke, et al., 1989; Meeks, et al., 2007; Voelkl, Fries, & Galecki, 1995). Assisted living residents are less likely to engage in active kinds of activities (e.g., recreational activities and socializing with friends) than independent living residents (Jenkins, et al., 2002). It may be that assisted living residents are frailer and less involved in outside social spaces and events than independent living residents. Institutionalized elders who live in a larger facility, with low levels of staffing but with a high supportive social climate are more likely to engage in activities (Lemke, et al., 1989). Finally, elderly residents with physical and cognitive impairments are less involved with activities than those not impaired (Dobbs, et al., 2005; Everard, et al., 2000; Lemke, et al., 1989; Meeks, et al., 2007).

Current Instruments Measuring Institutional Social Activities

Few instruments of social activities are available to long-term care residents, compared to the number of instruments for community populations. Table 3 lists seven published instruments measuring institutional social activities. Many of these instruments are observational scales and were developed by categorizing observed activities held in long-term care facilities (Meeks, et al., 2007; Mor, Branco, Fleishman, Hawes, Phillips, et al., 1995; Zimmerman, Scott, Park, Hall, Wetherby, et al., 2003). Some instruments are based on the Minimum Data Set for Nursing

Home Resident Assessment and Care Screening and additional observed activities (Ejaz, et al., 1997; Gerritsen, Steverink, Frijters, Hirdes, Ooms, et al., 2008; Mor, et al., 1995). One social activity instrument was developed from the surveys administered to long-term care and community populations (Klumb, et al., 2007). However, the physical capacity of individuals in institutionalized and in community elderly populations and their respective supportive social environment are different. Measures which developed from purely community elderly populations or a combination of institutionalized and community elderly populations are inappropriate to assess socially supportive activities taking place in long-term care facilities.

With respect to social activity in elderly-care institutions, Lemke and Moos (1989) include three categories in their measurement: common facility-organized, informal, and community activities. Ejaz, et al (1997) determined five activities that involve social interaction including attending parties/social programs, playing games, participating in arts and crafts, attending resident council meetings, and exercising. Authors defined the item "frequency of visits from family and friends" as a different variable, "quality of social relationship outside the nursing homes."

Likewise, Zimmerman and colleagues classified three types of residential care/assisted-living activities which are based on the categories of social activities defined by House, et al (1982) using community populations. These types of activities consist of private activities (e.g. writing letters, reading, working on a hobby, and talking on the telephone), group activities (e.g. attending arts and crafts; playing cards, bingo, and games; attending religious services; and going to the movies), and outings (going out to eat and drink; shopping, browsing in stores; and going for walks). All involved activities are significantly associated with the residents' social

TABLE 3. Published Instruments Measured Social Activity in Long-Term Care Facilities

Author(s)/Year	Sample	Activities Included	Response format	Reliability	Validity
Lemke, et al. (1989)	1428 residents in 42 congregate facilities	*Activity Involvement* 28 *Organized activities* 1. Religious services 2. Bingo, cards or other games 3. Exercise or other physical fitness activity 4. Social hour (e.g., coffee or cocktail hour) 5. Classes or lectures 6. Self-help or mutual support group B. Informal activities 1. Watched TV 2. Read a newspaper or book 3. Visited with other residents 4. Took a walk 5. Sewed or knitted 6. Played cards, checkers, chess, or other game 7. Engaged in photography, wood working, ceramic, or other hobby C. Community 1. To visit friends or relatives 2. To go shopping 3. To eat in a restaurant 4. To attend religious services 5. To attend the movies 6. To go to a senior citizens center 7. To go to ballgame or other sport event	A: rarely or never, a few times a year, once or twice a month (1 point), or once a week or more (2 points) for each activity checked B. One point for each activity checked during the preceding week C. rarely or never, a few times a year, once or twice a month, or once a week or more. One point for each activity participated at least a few times a year	Cronbach's alpha = .75 for participation in social-recreational activities, .61 for activity level, and .77 for integration in the community	Lack

TABLE 3. - *Continued*

Author(s)/Year	Sample	Activities Included	Response format	Reliability	Validity
Mor, et al. (1995)	1848 residents from 268 nursing home facilities	*Index of Social Engagement Scale* 1. at ease interacting with others 2. at ease doing planned or structured activities 3. at ease doing self-initiated activities 4. established own goals 5. pursues involvement in the life of the facility 6. accepts invitations into most group activities	Observational scale 1. Dichotomies (yes/no) 2. Average waking time spent in activities over the past 7 days None Little (less than 1/3 of time) Some (1/3 to 1/3 of time) Most (more than 2/3 of time)	Interrater reliability Intraclass correlation from .51-.64 Cronbach's alpha = .78	Construct validity established
Ejaz, et al. (1997)	175 nursing home residents	*Group Activities* 1. games 2. arts/crafts 3. parties/social programs 4. exercise 5. attending resident council meetings	Self-report responses Likert-scale Participation in the activity in the past 4 weeks raged from 0 (no participation) to 5 (participated in all five)	Lack	Lack
Zimmerman, et al. (2003)	2078 residents of 193 residential care/assisted-living facilities	*Assisted Living Social Activity Scale* 1. Private activities (talking on the telephone, reading, writing letters, working on a hobby) 2. Group activities (attending religious services, playing cards, bingo, games, going to the movies, attending arts and crafts) 3. Outings (going for walks, going out to eat or drink, shopping/browsing in stores)	Dichotomies (yes/no) in the past seven days	Cronbach's alpha = .74 with a rage from .61 (private and group) to .59 (outings).	Lack

TABLE 3. - *Continued*

Author(s)/Year	Sample	Activities Included	Response format	Reliability	Validity
Klumb, et al. (2007)	473 older people lived in the community as well as in institutions	Regeneration 1. resting 2. self-maintenance Production 1. gardening 2. helping others 3. housework 4. paid work 5. running errands Consumption 1. active leisure 2. health-related activities 3. locomotion 4. social interaction 5. reading 6. watching TV; listening to radio, records, tapes	The average amount of time allocated to each activity	Lack	Lack
Meeks, et al. (2007)	28 nursing home residents	*Observed Activity* 1. organized group activity 2. informal group activity 3. solitary activity *Staff-recorded activity* 1. planned, infacility, group activities 2. one-to-one visits or in-room activities 3. religious activities 4. exercise groups 5. planned out-of-facility activities	The level of engagement: active, passive, distracted, disruptive Observed for 5-minute intervals six times per week	All raters met a criterion reliability average of 0.75. Intraclass reliability coefficients of observed activity was 0.89.	Lack

TABLE 3. - *Continued*

Author(s)/Year	Sample	Activities Included	Response format	Reliability	Validity
Gerritsen, et al. (2008)	189 nursing home residents	*Revised Index of Social Engagement Scale* 1. at ease interacting with others 2. at ease doing planned or structured activities 3. pursues involvement in the life of the facility 4. accepts invitations into most group activities 5. initiates interaction(s) with others 6. reacts positively to interactions initiated by others	Dichotomies (yes/no)	Cronbach's alpha coefficient = 0.73 Intrarater kappa mean of items = 0.60 Intrarater ICC of scale = 0.76 Interrater kappa mean of items = 0.54 Interrater ICC of scale = 0.75	A panel of 20 experts established content validity.

Note. ICC = intraclass correlation coefficient.

interaction (Zimmerman, et al., 2003). Zimmerman and his colleagues (2003), again, categorize the number of visits and phone contacts with family and friend into a "social engagement" variable.

Although different authors define different variables, questions about the frequency of contacts with family or friends via visits or phone calls relate to social interactions within their social network. Therefore, such questions should be taken into consideration of developing a scale of socially supportive activity as a whole construct of social support. Regardless of how social activities are categorized, again, all activities reported in these previous studies constitute vital components of social interaction.

The Index of Social Engagement Scale (ISE) developed by Mor and et al. (1995) is often utilized to assess social behaviors and actual involvement in the social and recreational life of American nursing home facilities. Studies using the ISE investigated the effect of social engagement on mortality (Kiely, et al., 2003; Kiely, et al., 2000), sensory impairment (Resnick, Fries, & Verbrugge, 1997), and depression (Achterbert, et al., 2003). The ISE is an observational scale. Domains of the scale include "at ease interacting with others," "at ease doing planned or structured activities," "accepts invitations to most group activities," "pursues involvement in the life of the facility," "establishes own goals," and "at ease doing self-initiated activities."

Gerritsen and colleagues (2008) revised the scale to study Canadian and Netherlander nursing home residents. Gerristen et al. (2008) excluded "at ease doing self-initiated activities" and "establishes own goals" because both items reflect the resident's autonomy and are not supported in the literature nor relate to social orientation. Two new items referring to the quality of social interaction, "initiates interaction(s) with others" and "reacts positively to interactions

initiated by others," were added for a better content validity and to improve an interrater item reliability score of 0.75, compared to the original ISE score of 0.64.

Although both the original and revised Index of Social Engagement Scales are acceptable and appropriate for long-term care residents, neither version has been tested in Chinese or Taiwanese populations. Likewise, items included in both scales are represent overall evaluation of social engagement and are not sufficient specific indicators of the quantity and quality of participation in socially supportive activity.

The selection of a reliable and valid instrument to measure the proposed concepts in this study is vital. However, except for the original and revised versions of ISE, most published instruments of social activity lack reliability or validity, or both (Table 3). The absence of estimated psychometrics of an instrument reduces one's confidence in the value of instrument. More importantly, the majority of instruments (Ejaz, et al., 1997; Meeks, et al., 2007; Zimmerman, et al., 2003) incorporate a significant amount of physical activities such as exercise and walking. The healthful benefits of such physical activity can influence psychosocial functioning.

Although all activity can have a social dimension, health-related physical activity should not be confused with purely social activity (Herzog, Ofstedal, & Wheeler, 2002; Riddoch, 2000). Health-related physical activity should not be included in the category of socially supportive activity if the psychosocial mechanisms of participating in social activity have on mental health are to be understood. Likewise, a review of the literature found that a definition of social activity is commonly absent in sizable studies, resulting in unclear boundaries of social activities. This situation reflects on more colloquial categorization of activities than conceptual (Herzog, et al.,

2002). This study will develop a new instrument of socially supportive activities which will explicitly define and specify purely social activities in elderly-care institutions.

Self-transcendence and Depression

Finally, to consistently use Reed's theory of self-transcendence, the existing literature about the relationship of self-transcendence to depression using Reed's definition of self-transcendence has been reviewed. A summary of self-transcendence-related studies is shown on Table 4.

In health care, the concept of self-transcendence has been applied to a wide range of populations, except children. Among the existing studies on self-transcendence, self-transcendence is a correlational variable of health and also an indicator of interventional outcome. Studies on self-transcendence, however, have been shown to be related to mental health, particularly depression in younger and older adults (Ellermann, et al., 2001; Klaas, 1998; Harrison, 2007; Nygren, Alex, Jonsen, Gustafson, Norberg, et al., 2005; Reed, 1991; Stinson, et al., 2006); emotional well-being (Coward, 1998; 2003; Hunnibell, 2006); physical functioning (Upchurch, 1999), spirituality (Ellermann, et al., 2001; Ramer, Johnson, Chan, & Barrett, 2006), and the quality of life (Bean & Wagner, 2006; Mellors, Riley, & Erlen, 1997). Most significantly, self-transcendence has consistently shown an inverse relationship with depression (Ellermann, et al., 2001; Klaas, 1998; Reed, 1991; Stinson, et al., 2006). Findings indicate that older people who have lower level of self-transcendence were associated with higher level of depression. Little is known, however, about the relationship between self-transcendence and depression in the Taiwanese elderly population.

TABLE 4. Existing Studies of Reed's Self-Transcendence and Use of Self-Transcendence Scale (STS)

Authors (year)	Purpose	Design	Subjects	Results
Coward (1996)	To document the presence of ST perspectives in a health population and to compare ST and related concepts with previous findings in elderly well persons and in those with life-threatening illness.	Descriptive, correlational study	152 health adults	ST moderate correlated with the sense of meaning and the sense of having the resources to meet what is demanded. Slightly lower mean scores on the ST of the younger healthy persons. ST moderate correlated with female gender, older age, and higher self-report of health status. ST strongly correlated with sense of coherence, self-esteem, hope, and emotional well-being
Mellors, Riley, & Erlen (1997)	To examine relationship between ST and quality of life in people infected with HIV.	A descriptive, cross-sectional study	46 HIV-positive subjects	Caucasian 65.2%, African-American 26.1%, Hispanic 2.2%, Unknown 6.5% High score on STS in this sample ST sig. positive correlations with health and QOL. The highest level of ST showed in people who were HIV-infected (non-AIDS) but symptomatic. The lowest level of ST showed in people diagnosed with an AIDS indicator condition. No significant differences in ST among disease stage.

TABLE 4. - *Continued*

Authors (year)	Purpose	Design	Subjects	Results
Chin-A-Loy & Fernsler (1998)	To examine ST in older men attending a prostate cancer support group	Descriptive pilot study	23 men attending a prostate cancer support group	No sig. correlations between ST and age, length of time living with prostate cancer, or educational level. Similar means scores of STS for men with prostate cancer, for oldest-old adults, and for women with advanced breast cancer. Similar means scores of STS for men with Slightly higher mean scores of STS for men with prostate cancer than the mean reported for a younger healthy population.
Coward (1998)	To examine the feasibility and patterns of effectiveness of a breast cancer support group intervention specifically designed to facilitate ST views and perspectives that would enhance emotional and physical well-being	Pre-experimental design pilot intervention study	16 women recently diagnosed breast cancer	A positive association between ST and emotional well-being. Increased scores on ST and well-being variables at the end of the intervention.
Klaas (1998)	To compare patterns of depression, meaning in life and ST in a group of elders 75 years of age and older	Descriptive, correlational study	77 elders residing independently or semi-independently retirement communities	Strongly negative relationships between depression and ST. ST strongly associated with the experience of well-being.

TABLE 4. - *Continued*

Authors (year)	Purpose	Design	Subjects	Results
Upchurch (1999)	To explore relationships among ST, health status, and ability to perform activities of daily living in non-institutionalized older adults	Descriptive study	88 older adults, 65 years of age or older in senior-citizen and community-center organizations	2 of the participants were non-Hispanic White; 2 were Hispanic. The group possess a fairly high degree of ST at a mean score of 52 ST sig. positive correlation with the instrumental activities of daily life. ST accounted for 6% of the explained variance.
Ellermann & Reed (2001)	To examine the significance of self-transcendence and its relationship to depression in middle adulthood	Descriptive, correlational study	133 generally healthy middle-aged adults	Sig. relationship between S-T and depression in the younger subgroup, but not statistical significance in the older subgroup. Sig. lower ST in the younger subgroup than older subgroup. Sig. positively correlation between spirituality and ST. Sig. correlation between ST and depression for men and women. ST and acceptance together explained a significant 27% of the variance in depression.
Croward (2003)	To pilot a second support group intervention study promoting ST perspectives and activities and to document changes over time in well-being in support group participants compared with nonparticipants	Pilot study of second support group intervention on urban women with breast cancer Quasi-experimental, partial randomization, preference trail design	39 women with newly diagnosed breast cancer	Caucasian (91%), Hispanic (5%), Asian (5%) The intervention group had lower score than the comparison group on ST and well-being variables at baseline. Scores were higher for both groups post-intervention with no differences between groups. Moderate to strong correlations between emotional well-being and ST. Older age had stronger ST.

TABLE 4. – *Continued*

Authors (year)	Purpose	Design	Subjects	Results
Diener (2003)	examine the effectiveness of personal narrative as an intervention to enhance the development of ST in women with the chronic illnesses of HIV, Multiple Sclerosis, and Systemic Lupus Erythematosus	A randomized, clinical trial	34 women	ST sig. improved in the 3-week invention groups.
Nygren, Alex, Gustafson, Norberg, & Lundman (2004)	To describe resilience, sense of coherence, purpose in life and ST in relation to perceived physical and mental health in a sample of the oldest old	Descriptive study	125 elderly participants aged 85 years or older	Sig. correlations between scores on the Resilience Scale (RS), the Sense of Coherence Scale (SOC), the Purpose in Life Test (PIL), and the Self-Transcendence Scale (STS). Sig. correlations between scores on RS, SOC, PIL, STS and SF-36 Health Survey Questionnaire only applied for the women. Sig. correlations between scores on above scales and perceived mental health among the women but not among the men.
Stinson & Kirk (2005)	To assess the effect of group reminiscing on depression and ST of older women residing in an assisted living facility	Experimental intervention study (reminiscence vs. activity)	24 women aged 60 years and older residing in an assisted living facility	No sig. decreased in depression or increased in ST after six-week reminiscence intervention. No sig. correlation between age and depression or ST. Sig. inverse relationship between ST and depression over time.

TABLE 4. - *Continued*

Authors (year)	Purpose	Design	Subjects	Results
Bean & Wagner (2006)	To explore relationships between ST and quality of life, illness distress, and selected demographic variables in liver transplant recipients	Correlational cross-sectional design study	471 liver transplant recipients	Caucasian 85.6%, Hispanic 5.3%, Other 4.3%, African American 3.6% Females reported higher ST scores across all time-since-transplant groups. ST sig. positive correlated with QLI, self-report health status, female gender, and being employed. ST sig. negative correlated with illness distress, fatigue scores, and time-since-transplant groups.
Hunnibell (2006)	to examine the differences in ST between hospice and oncology nurses and identify the relationship between ST and the burnout syndrome	Descriptive study	244 hospice nurses and 319 oncology nurses	Sig. correlations between ST and three burnout symptoms including emotional exhaustion, depersonalization, and personal accomplishment. Higher levels of ST on hospice nurses than oncology nurses
Ramer, Johnson, Chan & Barrett (2006)	To examined the relationship of sociodemographic and clinical factors with spirituality and ST in people with HIV/AIDS	a cross-sectional study on a public-hospital population	420 HIV/AIDS patients from an HIV clinic	Hispanic 72.4%, White 14.3%, Black 12.4%, Asian 0.2%, Other 0.2%, and Unknown 0.2% ST scores increased with age, but not statistical significance. No sig. correlations between ST and the other demographic factors of gender or sexual orientation. As the level of energy increased, ST also increased. Sig. higher ST scores on subjects who perceived family members as supportive Sig. higher ST score on subjects with higher levels of disease progression indicators were not related to ST.

TABLE 4. - *Continued*

Authors (year)	Purpose	Design	Subjects	Results
Harrison (2007)	To explore the relationship between Reed theory of ST and mental health within the long-term care population	A descriptive, correlational study	51 oldest-old nursing home adults ranged from 80 to 103 years old	Caucasian (80%), Black (20%) An inverse relationship to depression
Runquist & Reed (2007)	To examine the relationships of spiritually and physically related variables to well-being among homeless adults	A descriptive, correlational study	61 persons from one men's and one women's homeless shelter	Caucasian (59%), Mexican American (18%), African American (12%), and Asian American (2%) ST sig. positive correlated with well-being. Homeless participants with higher score of well-being had higher levels of health status, self-transcendence, and spiritual perspective.

Note. ST= self transcendence. STS = Self-Transcendence Scale. QOL = Quality of Life. Sig. = significant.

The Self-Transcendence Scale developed by Dr. Reed (1986, 1991) was used as a measurement of self-transcendence in various ages and groups. These groups encompass healthy adults (Coward, 1996; Ellermann, et al., 2001), older adults (Reed, 1989, 1991; Decker & Reed, 2005; Klaas, 1998; Nygren, et al., 2005; Stinson, et al., 2006; Upchurch, 1999), AIDS patients (Mellors, et al., 1997; Ramer, et al., 2006), cancer patients (Chin-A-Loy & Fernsler, 1998; Coward, 1998, 2003), liver transplant recipients (Bean, et al., 2006), homeless adults (Runquist & Reed, 2007), and nursing staff (Hunnibell, 2006). The vast majority of subjects were Caucasians living independently in the United States. Several studies using Reed's self-transcendence have also been conducted in institutional settings such as assisted living facilities (Stinson, et al., 2006), homeless shelters (Runquist, et al., 2007), and retirement communities (Klass, 1998). Nevertheless, Reed's theory of self-transcendence has not been used to examine its relationship to depression in institutionalized elders in Taiwan until this present study.

Summary

The incidence of depression in institutionalized Taiwanese elders is a problem, both in adequate diagnosis and treatment. Depression is a common trans-cultural problem for elders who have been relocated. The level of social support can be managed and controlled to improve depression by providing a more socially stimulating environment. It is more difficult to attempt to control individual demographic disadvantages and the inevitable physical changes of advanced age. Literature has shown that social support has a beneficially protective effect against depression. Likewise, engaging in social activities enacts a moderating effect on the impact that negative life events has on older adults and lowers their level of depression.

Whereas social support has a positive association with the degree of social activity, the analysis of how such support works has thus far been limited to studying participation in social activities. The psychosocial mechanism of socially supportive activities on reducing depression has not been investigated among institutionalized elders. Qualitative evidence indicates that the benefits of developing new social networks in an elder care institution may assist in mitigating the negative adjustments of relocation.

Likewise, the literature consistently reveals that support from fellow residents, other acquaintances, and friendships are as important as familial support in influencing depression in the residents of elder care institutions. Such interpersonal relationships can develop through participating in socially supportive activities within an institutionally-organized social environment. Although the advantages of engaging in social activities reported in the literature outweigh the disadvantages, more evidence is needed to explain how participation in socially supportive activities influences the stress-buffering effect on depression among institutionalized elders. This project developed a new instrument to create a more precise explanation of the psychosocial benefits of socially supportive activities.

CHAPTER THREE: METHODS

The main aims of this study were to develop a culturally sensitive instrument to assess quantity and quality of socially supportive activities for Taiwanese elder care institutions and to test a causal model of socially supportive activity, self-transcendence, and depression on institutionalized elders. The methodological section included (1) research design, (2) study sample (sampling and sites), (3) measurements (4) data collection procedures, and (5) data analysis planned.

Research Design

This study was designed to be descriptive, correlational. Questionnaires were administered once to elderly residents in elder care institutions in Taiwan. Two pilot studies testing the psychometric properties of a translation instrument and a newly developed instrument were conducted before the main study.

Study Sample

Sampling

A convenience sample was used in this study. The estimation of sample size was set on the significant level at $\alpha < 0.05$, which allowed 5% probability of rejecting a true null hypothesis, and power at 0.80, which yielded 80% probability of rejecting false null hypothesis. Power analysis software was run to yield a sample size of 193 subjects (Hintze, 2007). The inclusion criteria were: voluntarily participating in this study, being 65 years or older, being cognitively competent, having at least one family caregiver, and being able to speak the Mandarin or Taiwanese dialect. The Short Portable Mental Status Questionnaire (SPMSQ) was used to determine the level of cognitive competence (Pfeiffer, 1975). Participants with mild intellectual

impairment, according to Pfeiffer, were considered cognitive competence. The cut-off score of the SPMSQ depended upon one's educational level. Competence was defined as a score of three or less for participants with an elementary education and a score of two or less for participants with post-elementary education. Participants were excluded if they had any obvious speech or hearing problems that would make participation impractical and if they had been diagnosed with any psychiatric disorder by a physician other than depression and confirmed by primary nurse.

Sites and Settings

Data collection took place in elder care institutions in southern Taiwan. Eligibility criteria included elderly-care institutions that were registered hospital-based/freestanding nursing homes and community-based institutional facilities listed on the website homepage of the Taiwan Long-Term Care Professional Association, had a resident population of 50 or more, provided diverse activities to their residents, and were interested in participating in the study. The southern Taiwan region was selected due to easy access for the researchers and high density of elder care institutions.

Measurements

There were six proposed concepts to be measured in this study: institutionalization histories, filial responsibility expectation, perceived stress, self-transcendence, socially supportive activities, and depression. Each concept was separately measured by a different reliable instrument. In addition, one pre-screening tool was administered to evaluate the cognitive competence of the participants. A demographic questionnaire was developed for this study concerning individual characteristics which were used to describe the sample. The demographic questionnaire consisted of age, gender, educational level, total years of formal

education, ethnicity, economic status, marital status, number of children, religious preference, and frequency of anticipated visits by their children.

Short Portable Mental Status Examination

The Short Portable Mental Status Questionnaire (SPMSQ) was used to screen cognitive capacity in the elderly (Pfeiffer, 1975). The SPMSQ was selected, besides its adequate reliability, because it is easily administered, easily scored, broadly used in Taiwanese elderly-care institutions, and it takes into account the effect of educational levels. Also the Chinese version of SPMSQ was modified and available (Chi & Boey, 1993; Lin, Dai, Lin, Chen, & Lai, 1996). The SPMSQ included evaluation of short-term and long-term memory functions, orientation, information about current events, and the capacity to perform serial mathematical tasks (Pfeiffer, 1975).

The SPMSQ consisted of only 10 items --- scoring 1 for an incorrect answer and 0 for a correct answer. Total scores ranged from 0 to 10. The SPMSQ indicated different levels of intellectual functioning and is calculated by summing up the number of incorrect answers given on 10 questions. A score of zero to two indicated intact intellectual function, 1-2 indicated mild impairment, 3-5 indicated moderate impairment, and above 5 indicated server impairment (Chi, et al., 1993; Chou, 2002). According to Pfeiffer (1975), one more error was allowed to subjects with only a grade school education (1-8 years of school). One less error was allowed to subjects with education beyond high school. Test-retest correlations ranged from 0.70 to 0.83 (Pfeiffer, 1976; Chi, et al., 1993). Cronbach's alpha reliability was 0.97 among nursing home residents (Yeh, et al., 2002).

Institutionalization Histories

Institutionalized histories were measured by asking "How willing were you to come here to live?" and "How willing are you be here now?" to measure the degrees of willingness to be institutionalized and willingness to remain institutionalized, respectively. A 7-point Likert response format was provided to circle the highest numerical values to indicate the degree of willingness to be institutionalized. The responses ranged from 1 to 7, with the higher number indicating a higher degree of willingness to be institutionalized. A neutral option "neither opposed nor willingly agreed to institutionalization" was given at a score of 4. Score 1 was strongly opposed followed by mildly opposed, moderate opposed, mildly willing, moderate willing, and strongly willing for scores of 2, 3, 5, 6, and 7 respectively.

The question of the length of stay in the institution measured the elder's answer to "How many months have you been in the elder care institution?" and verbally confirmed by the primary nurse. The actual number of months at the institution for each participant counted. All questions related to institutionalization histories were included in the demographic questionnaire. However, the values of Cronbach's alpha for institutionalization histories were absent because of one-item scale in this study.

Filial Responsibility Expectation

Filial responsibility expectation was measured by assessing aged parents' expectancy for receiving care by their offspring. Elders were asked which is "Do you believe that your children are caring for you the way children are supposed to care for their elderly parents?" The responses ranged from 1 (not necessary) to 10 (extremely necessary). A score of 1 indicated that there was no expectation that children would care for their aged parents. A higher score indicated a higher

expectation of filial responsibility. The following open-ended question, "Why do you think that?" was provided to give qualitative information about the elder's expectation of filial responsibility. Both quantitative and qualitative questions of filial responsibility expectation were included in the demographic questionnaire. In this study, Cronbach's alpha for the expectation of filial responsibility was absent due to one-item scale.

Perceived Stress

Perceived stress was measured by the Perceived Stress Scale (PSS). The PSS is a common tool with an internally consistent measure of perceived stress. The central components of experiencing stress were situations that a person perceives as unpredictable, uncontrollable, and overloading (Cohen, Kamarch, & Memelstin, 1983; Cohen & Williamson, 1988). A shortened version of Perceived Stress Scale (PSS 10) was made up from the original 14-item scale of Perceived Stress (PSS 14) (Cohen et al., 1983; Cohen et al., 1988). The PSS 10 was used in this study. Dropping four of the 14 items (item 4, 5, 12, and 13) resulted in better psychometric properties in a probability sample of the United States and has been suggested for use in research (Cohen, et al., 1988). Concurrent and predictive validities have been reported (Cohen, et al., 1983; Hewitt, Flett, Mosher, 1992). Strong internal consistency of the PSS have been reported with coefficient alpha values ranged from 0.84 to 0.86 and a good test-retest reliability ranging from 0.55 to 0.85 in a study of college students (Cohen, et al., 1983). The PSS 10 was selected because it is simple, economical, and specially designed for limited education. It is also selected because a Chinese version of the scale is available. In addition, the PSS 10 was designed to present a global self-rating of event stressfulness and not just a response to a particular stressful event.

The 10-item Perceived Stress Scale was a 4-point Likert scale with items ranging from 0 for "never" to 4 for "very often" with the possible total scores ranging from 0 to 40. The PSS items were able to predict perceived levels of stress over a one- to two-month period after administration of scale (Cohen, et al., 1983). Items 4, 5, 7, and 8 were reverse scoring. On the other words, Scores were obtained by having 0 = 4 points, 1 = 3 points, 2 = 2 points, and 1 = 0 point which are then added to the points of the other six items. The total score was indicative of the level of perceived stress: the higher the score received on the PSS 10, the higher was the level of perceived stress. Adequate test-retest reliability and construct validity of the Chinese version of the PSS have been reported among the study of postpartum women (Chen, Tseng, Wang, & Lee, 1994, Chen, 1996). The 10-item Chinese-version Perceived Stress Scale has reported adequate internal consistency (α =0.76) among Taiwanese primiparas women (Chen& Wang, 2002). Cronbach's alpha for this scale was acceptable at 0.75 in this study.

Self-transcendence

Self-transcendence was measured by the Self-Transcendence Scale (STS). The STS was selected because it is a short form of measurement, a theoretically derived instrument, and a widely-used instrument in western countries, although not widely used in eastern countries with the exception of Korea and Japan. The STS was a uni-dimensional instrument that emphasized psychosocial and spiritual resources for developmental abilities (Reed, 1991; 2007). The STS consisted of 15 items that measure the extent to which a person experiences intrapersonal, interpersonal, and temporal characteristics of life that expand the boundaries of self (Reed, 1991). The STS was a 4-point Likert scale with items ranging from 1 for "not at all" to 4 for

"very much," with the possible total scores ranging from 15 to 60. The total score was indicative of the level of self-transcendence: the higher score indicated better self-transcendence.

The STS has shown adequate psychometric properties to indicate reliable and valid measures of the concept of self transcendence. Reliabilities and validities have been well estimated. Reliability as estimated by Cronbach's alpha ranged from 0.80 to 0.93 in older adults (Reed, 1989; 1991; Decker & Reed, 2005), 0.77-0.88 in breast cancer women (Coward, 1991), 0.86 in HIV-positive samples (Mellors, et al., 1997), and 0.83 in homeless adults (Runquist, et al., 2007) with acceptable reliability coefficients for such a widely-used scale (Cramines & Zeller, 1979). Test-retest reliability was 0.95 (Reed, 1991). Supports for construct validity which the STS related to other measures consisted of a phenomenological study of self-transcendence in caregivers of terminally ill patients (Coward, 1990) and many correlational studies on emotional well-being (Coward, 1991), the Purpose-in-Life Test (Coward, 1996), quality of life among HIV positive samples (Mellors, et al., 1997), and general well-being (Runquist, et al., 2007) with a correlation of 0.78, 0.76, 0.54, and 0.68 respectively as well as in current life situation among older adults (Reed, 1991). Cronbach's alpha was 0.78 for this scale in this study.

Pilot Study 1: Psychometrics Testing on the Chinese Version of Self-transcendence Scale

Background and Purpose

The first pilot study translated the English version of Self-Transcendence Scale into Chinese and then tested its psychometric properties. Because this was a cross-cultural study, the selection of a validated instrument is extremely important. Utilizing a culturally sensitive instrument to measure the proposed variables allows the researcher to produce rigorous and accurate data. According to Flaherty and his colleagues (1988), the most important criteria for

instrument selection in cross-cultural research in order are: 1) instruments have been proven to be cross-culturally equivalent; 2) instruments that have been tested and found to be acceptable psychometric properties in one culture but have not been tested in other cultures; and 3) instruments that have high face validity but require further psychometric testing in the country of origin followed by cross-cultural validation.

Reed's Self-Transcendence Scale meets the first two criteria. The acceptable psychometrics of the STS has been established by the original author and other researchers across cultures. Evidence shows that the STS is a cross-cultural scale. There are more details about the reliability and validity of the STS in the subsection, "Measurement." The STS has been translated and studied in Japanese, Spanish, Korean, and Swedish. Yet, the STS has not been translated or studied in Chinese. Therefore, the purpose of the first pilot study was to test the psychometric properties of the Chinese version of Self-Transcendence Scale for the dissertation.

Sample of Pilot Study 1

A convenience sample was used in pilot study. A total of 97 Taiwanese community-living elders were recruiting during June 2008 to October 2008. Inclusion criteria included older people who (a) volunteer to participate in this study, (b) aged 60 years or older, and (c) able to speak Chinese. Older adults who had any obvious speech or hearing problems that would make participation impractical were excluded (e.g., difficulty speaking due to a stroke or so hard of hearing that s/he could not understand what the researcher was saying).

Procedure of Pilot Study 1

The original Self-Transcendence Scale was translated into Chinese in the Spring of 2007 as an assignment for NURS707-Transcultural Nursing. After obtaining a written permission from

the initial author, three major translation steps were undertaken. First, a bilingual person translated the scale from English into Chinese. The translation was then reviewed for grammar and ease of understanding by a monolingual Chinese speaker. Finally, the Chinese version was translated back to English (i.e., without seeing the original English version). Three translators were involved in the translation process. Two of three qualified translators were competent Chinese and English speakers and had translation experiences. Both translators gained their bachelors, masters, and doctoral degrees in the United States. Both translators spoke fluent Chinese as the first language and English as the second language. Both translators were competent in translating the instrument. A third Chinese-speaking native was recruited to check grammar and ease of understanding in Chinese. This Chinese-speaking native has two master degrees, Chinese and Child Educational Administration in Taiwan, and is currently a fourth year doctoral student in the Department of Child Educational Administration in Taiwan. Eventually, any inconsistencies were resolved during this rigorous translation process.

Later, to establish content validity, a panel of three Chinese geriatric experts reviewed the final Chinese version for cultural and content equivalence. Content validity is the extent to which a specific set of items adequately represent a content domain (DeVellis, 2003). Content validity was computed by utilizing a 4-point rating scale based on the content validity index (CVI), which is most common, suggested and is based on experts' rating of item relevance for a specific culture (Lynn, 1986; Polit & Beck, 2006; Polit, Beck, Owen, 2007).

Finally, internal consistency reliability was estimated. After obtaining approval from the University of Arizona Institutional Review Board, the purpose of pilot study, procedural data collection, and time allotted to complete questionnaires were explained to each potential subject

in the public places (such as Buddhist temples or parks). A Chinese disclosure was given to each participant after the explanation of the study. All questionnaires were read to the volunteer participants using the pronunciation (or accent) which participants were used to by researcher. The researcher wrote down answers. It took approximately 15 minutes to complete two questionnaires: a demographic questionnaire and the 15-item Chinese version of STS.

Data Analysis

Statistical test was performed using the Statistical Package for Social Sciences (SPSS) for Window, version 16.0. Statistical methods including descriptive statistics, exploratory factor analysis, and reliability were processed. Reliability was examined using an estimate of Cronbach's coefficient alpha, indicating item internal consistency and inter-item and item-scale correlations. The higher an average inter-item correlation coefficient for a set of items is to one, the higher the reliability estimate of the instrument.

Exploratory factor analysis using a principal component analysis with varimax rotation was used to initially estimate the properties of principle components. Obtaining these properties of principle components allowed examining if the 15-item scale measures uni-dimensionality. To being a uni-dimensional scale, criteria include: 1) the first unrotated, extracted factor should explain greater than 40% of variance in the items, 2) the other factors should fairly explain equal proportions of the remaining variance, and 3) most of items should load on the first factor with a value of factor loading greater than 0.3 (Carmines & Zeller, 1979). In addition, Cronbach's alpha and percentage of variance explained displayed in exploratory factor analysis were used to compare the similarities to the original version, indicating the degree of translation equivalence. The results will be presented in Chapter 4.

Socially Supportive Activity

Socially supportive activity was measured using an index of the Chinese version of Socially Supportive Activity Inventory (SSAI) which has been newly developed especially for this study (Appendix A). This new instrument allowed evaluating the quantity and quality of socially supportive activities. This instrument referenced the categories of activities in nursing homes and assisted living facilities in America reported by Ejaz, et al. (1997) and Zimmerman, et al. (2003). In addition, this instrument used purely socially supportive activities commonly offered by the majority of Taiwanese elderly-care institutions and typical cultural activities all of which could be categorized into nine sub-categories. These sub-categories were (1) all social contacts with family members and friends (including visits and phone calls), (2) chatting with acquaintances (e.g., other residents and volunteers), (3) holiday-related activities (e.g., Chinese New Year, Spring Festival, Lantern Festival, Tomb Sweeping Day, Mother's Day, Father's Day, Dragon Boat Festival, Seventh Night of the Seventh Lunar Month, Ghost Festival, Moon Festival, Double Ninth Festival, Christmas, New Year's Eve, and monthly birthday parties), (4) cognitive games (e.g., Mahjong, Chinese chess, card games, black-jack) , (5) performances and visits by single or group organization in institution (e.g., group performances from outside associations, visits from volunteer organizations), (6) entertainment (e.g., Karaoke, watching movies or TV programs in public areas), (7) pleasure trips, (8) arts/crafts classes, and (9) religious activities (e.g., visits from hospital ministry). An additional 10^{th} sub-category of "others" was given and allowed elderly participants to add other socially supportive activities which were specifically offered by their institutions. Each sub-category contained three components including frequency, meaningfulness, and enjoyment.

Since 73.85% of contemporary Taiwanese older adults have limited elementary education or may even be illiterate (Ministry of the Interior, 2007), each sub-category activity was illustrated to be more easily understood. The frequency of socially supportive activity can vary from a daily occurrence (talk with a roommate, for example) to a yearly one (celebrating the Chinese New Year, for example), depending on the nature of the activity. Therefore to accurately measure frequency, the questionnaire specifically asked whether participation in a specific socially supportive activity occurs daily, weekly, monthly, or annually. The possible score for frequency ranged from 1 to 9 (1 = 1-2 times per year; 2 = 3-4 times per year; 3 = equal or more than five times per year; 4 = 1-2 times per month; 5 = equal or more than 3 times per month; 6 = 1-2 times a week; 7 = 3-4 times a week; 8 = 5-6 times a week; and 9 = daily). On the other hand, the quality of attending socially supportive activities, "How meaningful is participation to your life?" and "How much do you enjoy participating in it?" were rated on a 4-point Likert rating, 1 for "not at all" and 4 for "very much." Higher scores represented more frequent participation in the activity, greater meaning to one's life, and greater enjoyment in participating in the activity.

Pilot Study 2: Content Validity and Reliability of Socially Supportive Activity Inventory

Background and Purpose

The need to develop a Socially Supportive Activity Inventory (SSAI) for institutionalized elders has been discussed in detail in an earlier section. In conclusion, the main issues surrounding the need to develop a new instrument consist of integrating the question "frequency of outside and institutional social network contacts" into the instrument, expanding the selection of socializing opportunities from family-centered to non-familial contacts, including purely social activities and excluding health-related physical activities, and considering various

perceptions of desired social activities and available of socially supportive activities across cultures. The SSAI was a new instrument designed to examine the quantity and quality of elders' participation in socially supportive activities in institutional settings. The items included in this new instrument were based on the author's eight years of working experience in elder care institutions, the author's Taiwanese background, and a synthesis of theoretical relationships and empirical evidence.

To have a more a practical application of the SSAI for the care of Taiwanese elders, the SSAI was improved after examining the content validity and reliability of the instrument. Therefore, the purpose of pilot study two was to validate the SSAI as a measuring instrument in elder care institutions. This pilot study employed two stages. In the first stage, content validity was evaluated using a content validity questionnaire by a panel of experts (Appendix A). The determination of content validity of a new instrument is an essential step and requirement of the standards for tests and measurement (Benson & Clark, 1982; American Psychological Association, 1999). The aim of a content validity questionnaire was to gain feedback on what activity items to include in each category of socially supportive activity, what wording to use, and the clarity of wording of questions and rating responses. The decision to modify the items was made based on the responses of the expert panel. Any inconsistent items were discussed and resolved by the author and six experts via teleconferences. In the second stage, the stability of the SSAI over time in terms of test-retest reliability was evaluated through correlation of data for ten residents collected at the initial visit and with a follow-up evaluation in two weeks.

Sample of Pilot Study 2

Six experts were recruited to estimate the content validity of this instrument: two experienced institutional nurses, one doctorally-prepared nursing associate professor, one long-term care case manager, one social worker, and one recreational coordinator. In the second stage, to estimate test-retest reliability, a convenience sample of 10 Taiwanese institutionalized elders was recruited from a nursing home which provided ongoing activities for the residents. Eligibility criteria of these participants included: (a) age 65 years old or older (b) having been institutionalized for at least a period of six months, (c) having a score of 3 or lower on the Short Portable Mental Status Questionnaire, and (d) speaking a Mandarin or Taiwanese dialect. Older adults, who had any obvious speech or hearing problems, making participation impractical, were excluded.

Procedure of Pilot Study 2

First, a panel of six experts in various fields was invited to determine the appropriateness of test items and clinical feasibility of the instrument. The expert panel was asked to assess the SSAI items on the basis of six questions. The six questions included: (1) This activity/item should be included; (2) This item is clearly worded; (3) Rating response is appropriate; (4) This item reflects content important to socially supportive activity; and (5) This activity/item is easily distinguished from others on the index. Respondents were asked to rate the degree of agreement using a four-point scale, ranging from 1 for disagree to 4 for agree, on each category of socially supportive activity and each question evaluating the quality of socially supportive activity. An additional item-specific comment was provided on each of the five questions.

Next, after obtaining approval from the Institutional Review Board at the University of Arizona, the revised SSAI was administered to each of the ten institutionalized elders in an mixed skilled and intermediate care nursing at two separate times, an initial visit (Time 1) and two weeks later (Time 2). A two-week interval is necessary to minimize recall of the answer given at the initial visit (Knapp, 1995).

Data Analysis

Content validity data was analyzed by descriptive statistics including range, median, and mean. The percentage of responses to the validity questionnaire which each of the six experts rates their levels of agreement was calculated. The applicability of qualitative comments provided by an expert panel and the decision to use of this feedback to modify the original content of the instrument were made according to the following criteria: (1) Does this comment appears more than two times? (2) Is this comment useful to more clearly describe the item? (3) Is this comment related to the definition of a socially supportive activity? and (4) Is this comment useful in reassigning an item to another category without conflicting with another activity?

Test-retest reliability was presented by a correlation coefficient. The Spearman rho correlation was calculated for ordinal variables and for non-normal distributed data. The higher the correlation the two measurements, the higher the reliability estimate of the instrument. A paired-sample t test was used to examine the stability at Time 1 and Time 2. The results will be presented in Chapter 4.

Depression

Depression was measured by the 15-item Geriatric Depression Scale (GDS-15). The original Geriatric Depression Scale contains 30 items (Yesavage, Brink, Rose, Lum, Huang, et al., 1983) and is commonly used as a reliable screening test for depression in elderly populations. A shorter version Geriatric Depression Scale with 15 items has been derived from the original 30-item GDS. The 15-item GDS has shown highly correlated ($r = 0.84$-0.89) and better sensitivity rates than the original 30-item GDS (Sheikh & Yesavage, 1986; Lesher & Berryhill, 1994). It took approximately 5-10 minutes to administer the 15-item GDS. The response was a dichotomous format (yes/no). The 15-item GDS was selected because it is a simple and reliable tool as well as designed for elderly populations. GDS-15 also has a fewer number of potentially confounding somatic symptoms and has been recommended in assessing Chinese older adults to be at risk for depression (Wu & Kelley, 2007). Additionally, the Chinese GDS is available with a high degree of reliability.

The thirty-item GDS was translated into Chinese with a psychiatric outpatient sample (N=461) of males and females aged 60 or above (Chan, 1996). The Chinese version of GDS has provided stability reliability. The internal consistency reliability using Cronbach's method is high, with an alpha value of .89. The test-retest reliability showed a reliability coefficient of 0.85. Criterion-related validity with a psychiatrist diagnosis was good at 0.95. Concurrent validity was examined between GDS and CES-D (20-item Center for Epidemiological Studies Depression Scale). Concurrent validity with CES-D was high with a value of .96 ($p< 0.001$). All item-total correlations were good, ranging from 0.58 - 0.64. Item corrections with the psychiatrists' diagnosis, which indicate the value of external validity, were not as good as the item-total

correlations. Still its sensitivity (70.6%), specificity (70.1%), false negatives (29.4), and false positives (29.9%) were acceptable. For the 15-item assessment, a score of 0–4 was considered normal; 5–8 indicated mild depression, 8-11 indicated moderate depression, and a score over 12 was suggestive of severe depression. The maximum number of points that can be scored is 15. The fifteen-item Chinese version has shown satisfactory internal consistency that measured a Cronbach's alpha coefficient of 0.87 among elderly Chinese patients with Type II Diabetes mellitus (Cheng & Boey, 2000) and 0.82 among Taiwanese rural community-dwelling elders (Wang, Synder, Kaas, 2001). A cutoff point was 5 in this study, indicating mild depression. Cronbach's alpha for C-GDS was 0.78 in this study.

Data Collection Procedure

The elder care institutions were asked to sign a permission letter allowing data collection if they agreed to participate in the study. Since there was no official committee board to review protection of human subjects in the majority of elder care institutions in Taiwan, a written permission from the facility's director was sufficient to begin conducting the study. A copy of the site's authorization letter was sent to the Institution Review Board at the University of Arizona prior to the beginning of data collection. The researcher and research assistant arranged the visiting schedule with the director of the institution at their convenience. The director of the elder care institution asked eligible residents for permission to give their names to the research assistant. If the resident agreed, then the director gave the name to the researcher and research assistant. Then, the researcher and research assistant visited the resident to explain the study. Additionally, participants were recruited by word of month. A disclosure was provided to the

voluntary participants. Taiwanese elders were asked to give verbal, rather than written, consent to participate in this study.

In Taiwanese culture, signing a form is generally reserved for important legal documents but is unnecessary when an agreement has been reached and understood between trusted individuals. If elders are asked to sign a form, they may actually view the agreement uneasily and suspiciously, feeling that they have been coerced into an agreement. Further, Taiwanese elders are more comfortable giving their verbal assent and will be more likely to participate.

The SPMQ was admitted to screen the voluntary participant's cognitive competence. If the score of SPMQ failed to show participant's cognitive competence, only the demographic questionnaire would be filled out to minimize any hurt feelings of the voluntary participant. Survey questionnaires were read to the participants in person by researcher who labeled each survey with an identifying code number. During the interviews, participants were asked their preference as to where to conduct the interviews, such as in the person's room at the elder care institution. However, all interviews were held away from other people, where others could not hear the researcher talking with the participant.

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS) for Window, version 16.0. Statistical methods included descriptive statistics, reliability, and path analysis. Statistical method of path analysis was processed to explain direct and in-direct casual relationships among a set of independent variables, mediating variables, and a dependent variable and to estimate the degree and significance of path coefficients between variables

through a series of separate multiple regressions (DeVellis, 2003; Musil, Jones, & Warner, 1998; Norris, 2005; Polit, et al., 2004).

Prior to processing multiple regressions to examine the originally hypothesized model, the assumptions underlying regression were diagnosed and met. These assumptions included the level of measurement of dependent and predictor variables, normality, multicollinearity, linearity, and homoscedasticity. Both measurements of dependent variable (depression) and predictor variables were continuous data and fit to use multiple regressions. Normality was checked by visual examining a histogram of the standard residuals against a normal curve. Next, according to Hair, Black, Babin, Anderson, and Tatham (2006), multicollinearity refers to a high correlation of predictor variable to a set of other predictor variables. The presence of high correlations at 0.90 or higher can impact on decreasing the ability to predict the outcome variable, the estimation of the regression coefficients, and their statistical significance tests. Bivariate correlations between predictor variables and outcome variable were processed to evaluate multicollinearity. Overall reviewing correlation matrix showed on Table 16, correlation coefficients ranged from -0.68 to 0.85 among all proposed variables, indicating the assumption of no-multicollinearity met.

In addition, the assumptions of homoscedasticity and linearity were checked by scatter plots and a normal probability plot of regression standardized residual. The residuals plotted against the predicted values and against the independent variables (Munro, 2005). Homoscedastic refers to the equal variance of the dependent variable in terms of homogeneity of variance that facilitates data analysis. Linearity refers to a linear relationship between the

variables. Homoscedasticity and linearity also met. Path coefficients were estimated from correlations demonstrating two variables were related. The 0.05 level of significance was used.

CHAPTER FOUR: FINDINGS

Results of Data Analysis

The results of data analysis are presented in this chapter. The findings are discussed in three sections: 1) psychometric properties of the Chinese version of the Self-Transcendence Scale in pilot study one, in terms of content validity and reliability; 2) content validity and test-retest reliability of the Socially Supportive Activity Inventory in pilot study two; and 3) the testing originally proposed theoretical model and addressing the relationships.

Pilot Study 1: Test of the Chinese Self-Transcendence Scale (C-STS)

Description Sample

Demographic data are presented in Table 5 for those participants in the first pilot study. A total of 97 community-dwelling participants were invited to participate in this study. Of all participants, over sixty percent were married female. The mean age of the participants was 68.59 years (SD = 6.88), and the range was from 60-88 years old. Eighty-three participants were Fujianense (85.6%). The median number of years of formal education was 6, and the mean was 7.58. Most participants had an elementary school or a senior high school degree (32.0% or 29.9%, respectively), 6.2% obtained a bachelor degree, 13.3% were illiterate, and 2.4% reported having no formal education but were literate. The average number of children was 3. Traditional believer was the most frequent response, while Christian/Catholic was the least frequent. Sixty percent of the participants rated their finances as “just making ends meet.”

TABLE 5. Demographics of Pilot Testing Chinese Self-Transcendence Scale (N = 97)

	Mean	SD
Age	68.59	6.88
Number of years of formal education	7.50	5.41
Number of children	3.51	1.09
	n	%
Gender		
Male	37	38.9
Female	58	61.1
Ethnics		
Mainlander	4	4.1
Fujianese	83	85.6
Hakka	9	9.3
Unknown	1	1.0
Martial Status		
Single	1	1.0
Married	66	68.0
Widow	29	30.0
Unknown	1	1.0
Education Level		
Illiterate	13	13.3
Literate, no formal education	12	12.4
Elementary	31	32.0
Junior high	3	3.1
Senior high	29	29.9
Bachelor	6	6.2
Graduate	2	2.1
Religious Belief		
Traditional believer	40	42.1
Taoist	24	25.3
Buddhist	24	25.3
Christian/Catholic	4	4.2
None	3	3.2
Financial Status		
Poor	4	4.1
Just making ends meet	58	59.8
Have some savings	34	35.1
Unknown	1	1.0

Content Validity of the C-STS

Table 6 demonstrates the rating score of each item on the C-STS by three nursing or geriatric experts. Of the 15 items, 13 items were highly relevant with a CVI of 1.00. Items 9 and 10 had a lower value of CVI than other items at 0.67. Ultimately, the final score of scale-level CVI which represented the average item quality was 0.96. The item-level CVI also was 0.96. Eventually, item 9 and 10 were retained. One out of three experts who rated "somewhat relevant," expressed both items as important to measure self transcendence, but a minor wording change was needed. Thus, the content validity of the C-STS was confirmed.

Reliability of the C-STS

Table 7 presents the distribution of each item of C-STS. In this preliminary study, Cronbach's coefficient alpha for the 15-item scale was 0.89, which achieves acceptable criterion for a developed instrument of 0.80 (Carmines & Zeller, 1979). Item means ranged from 2.56 to 3.13 with a grand mean of 2.87. Eighty-nine percent of inter-item correlations was equal to or greater than r = 0.30. Item-scale correlations ranged from r =0.15 to r = 0.74. Among the 15-item-total correlations, item 13, "Letting others help me when I may need it', and item 15, "Dwelling on my past losses," did not meet the 0.30 criteria, indicating a low association between the item and the total scale. However, both items 13 and 15 were retained. The reasons were: 1) deleting any item would not magnitude increase alpha coefficient, 2) each item listed in the scale was developed independently, relevantly, and theoretically to the measurement of self transcendence, and 3) no redundancy items which were confirmed by the original author.

TABLE 6. Ratings on the Chinese Self-Transcendence Scale by Three Experts: Items Rated 3 or 4 on a 4-Point Relevance Scale (N = 3)

Item	Expert 1	Expert 2	Expert 3	# in agreement	Item CVI
1	x	x	x	3	1
2	x	x	x	3	1
3	x	x	x	3	1
4	x	x	x	3	1
5	x	x	x	3	1
6	x	x	x	3	1
7	x	x	x	3	1
8	x	x	x	3	1
9	---	x	x	2	0.67
10	---	x	x	2	0.67
11	x	x	x	3	1
12	x	x	x	3	1
13	x	x	x	3	1
14	x	x	x	3	1
15	x	x	x	3	1
Proportion Relevant:				Mean I-CVI = 14.34/15= 0.96	
	13/15 = 0.87	15/15 = 1.0	15/15 = 1.0		Mean expert proportion (SCVI/Ave) = 0.96

Note. Ratings of 1 = not relevant; 2 = somewhat relevant; 3 = quite relevant; 4 = highly relevant. Dashes indicate ratings of 1 or 2. Markers of "x" indicate ratings of 3 or 4. CVI = Content Validity Index. I-CVI = Item-level Content Validity Index. S-CVI = Scale-level Content Validity Index. SCVI/Ave = Scale-level Content Validity Index, averaging agreement calculation method. SCVI/Ave indicates the average of the I-CVIs for all items on the scale (Polit & Beck, 2006).

Translation Equivalence

The coefficient value of Kaiser's criterion of sampling adequacy was found high enough (0.82) for appropriate using factor analysis. A principle components factor analysis with varimax rotation was conducted on the 15-items resulting in a four factors solution with eigenvalues greater than 1 that explained 67.0% of the variance in the sample. The eigenvalues which four factors were 6.38, 1.39, 1.23, and 1.05. Four factors separately explained 43.1%, 9.1%, 7.9%, and 6.9% of the variance which showed in unrotated factor matrix. Factor loadings for the four extracted factors are shown on Table 4. Seven out of fifteen items with a greater value of factor loading at 0.51 fell into the first extracted factor. Additionally two items, item 14 and 9, could fall into either factor 1 or factor 2, depending on the cutoff of factor loadings. Factor loadings for the four extracted factors showed on Table 8. The properties of principle components supported the15-item STS as a uni-dimensional scale. Thus, one factor solution was processed to estimate the percentage of the variance in the items in terms of translation equivalence. In this preliminary study, one factor solution processing yielded 43.1% of variance in the 15 items. Factor loading ranged from 0.16 to 0.81. The factor solution with item loadings was shown on Table 7.

TABLE 7. Item Analysis of Chinese Self-Transcendence Scale (N=97)

Items	M (SD)	Range of Inter-item correlations	Item-scale correlations	If item deleted	One factor loadings
C-STS 1	2.90 (0.82)	-0.04-0.51	0.56	0.88	0.64
C-STS 2	3.04 (0.80)	0.06-0.55	0.61	0.88	0.68
C-STS 3	2.73 (1.03)	0.06-0.52	0.63	0.88	0.69
C-STS 4	3.13 (0.75)	-0.02-0.68	0.65	0.88	0.74
C-STS 5	3.09 (0.77)	0.03-0.67	0.55	0.88	0.64
C-STS 6	2.90 (0.84)	-0.01-0.75	0.64	0.88	0.73
C-STS 7	2.84 (0.85)	0.04-0.63	0.69	0.88	0.78
C-STS 8	2.78 (0.84)	0.13-0.60	0.62	0.88	0.67
C-STS 9	2.61 (1.03)	-0.04-0.60	0.65	0.88	0.73
C-STS 10	2.56 (0.91)	0.15-0.57	0.66	0.88	0.73
C-STS 11	2.98 (0.92)	0.10-0.60	0.48	0.89	0.52
C-STS 12	2.71 (0.83)	0.10-0.63	0.69	0.88	0.74
C-STS 13	2.66 (0.95)	-0.01-0.29	0.15	0.90	0.16
C-STS 14	3.01 (0.82)	0.15-0.63	0.74	0.88	0.81
C-STS 15	3.05 (0.91)	-0.04-0.29	0.15	0.90	0.17

The original 15-item STS was developed from a 36-item scale, the Developmental Resources of Later Adulthood (DRLA) scale (Reed, 1991a). Reed (1989) reported that items represented on the transcendence factor alone accounted for 45.2% of the variance in DRLA and a Cronbach's alpha of 0.93. Comparing the properties shown in this preliminary study, both the English and Chinese versions of STS reveal similar percentages of the variance in the items (45.2% vs. 43.1%) and Cronbach's coefficient alpha (0.93 vs. 0.89). Thus, the results support the uni-dimensionality of Chinese version of Self-Transcendence Scale as a cultural, reliable translation instrument.

TABLE 8. Factor Loadings for the Four Extracted Factors After Varimax Rotation with Kaiser Normalization

Item #	Item description	Factor 1	Factor 2	Factor 3	Factor 4
7	Finding meaning in my past experiences	**0.85**	0.21	0.07	0.01
6	Sharing my wisdom or experience with others	**0.83**	0.21	-0.07	-0.02
8	Helping others in some way	**0.70**	0.12	0.16	0.35
10	Able to move beyond some things that once seemed so important	**0.67**	0.30	0.13	0.11
3	Being involved with other people or my community when possible	**0.60**	0.31	0.26	-0.11
1	Having hobbies or interests I can enjoy	**0.57**	0.36	0.07	-0.28
12	Finding meaning in my spiritual beliefs	**0.51**	0.38	0.49	0.10
5	Adjusting to changes in my physical abilities	0.18	**0.82**	-0.03	0.07
2	Accepting myself as I grow older	0.27	**0.72**	0.19	-0.08
4	Adjusting well to my present life situation	0.44	**0.70**	-0.08	0.00
14	Enjoying my pace of life	**0.53**	**0.59**	0.17	0.12
9	Having an ongoing interest in learning	**0.50**	**0.55**	0.04	0.13
13	Letting others help me when I may need it	0.09	-0.17	**0.83**	0.03
11	Accepting death as a part of life	0.04	0.53	**0.69**	0.07
15	Dwelling on my past losses	0.07	0.06	0.06	**0.93**

Pilot Study 2: Test of the Chinese Socially Supportive Activity Inventory (SSAI)

Description Sample

Demographic data for the second pilot study are presented in Table 9. There were equal number of male and female participants in this study, with a mean age of 79.60 years (SD = 7.26). The mean length of stay in the institution was 46.10 months (SD = 20.52), ranging from 15-72 months. Seven out of ten participants (70%) were Fujianese.

Participants had a formal education, ranging from 3-14 years with a mean of 8.05 years. Forty percent of the participants had an elementary school, 20% had a junior high school degree, 10 % had a senior high school degree, and 30% obtained bachelor degree. Four participants were single (40%), one married (10%), three widowed (30%), and two divorced (20%). The average

number of children was two. The majority of participants were Christian/Catholic (70%). Six participants (60%) rated their finance as "just making ends meet," three participants (30%) rated as "having some savings," and one participant (10%) rated as "poor."

TABLE 9. Demographics of Pilot Testing Socially Supportive Activity Inventory (N = 10)

	Mean (SD)	Range
Age	79.60 (7.26)	70-91
Number of years of formal education	8.05 (3.75)	3-14
Number of children	2.00 (2.16)	0-6
Length of stay in the institution (months)	46.10 (20.52)	15-72
	n	%
Gender		
Male	5	50.0
Female	5	50.0
Ethnics		
Mainlander	3	30.0
Fujianese	7	70.0
Martial Status		
Single	4	40.0
Married	1	10.0
Widow	3	30.0
Divorced	2	20.0
Education Level		
Elementary	4	40.0
Junior high	2	20.0
Senior high	1	10.0
Bachelor	3	30.0
Religious Belief		
Traditional believer	1	10.0
Taoist	1	10.0
Christian/Catholic	7	70.0
None	1	10.0
Financial Status		
Poor	1	10.0
Just making ends meet	6	60.0
Have some savings	3	30.0

Content Validity of the SSAI

Table 10 illustrates the percentages, modes, and the mean response values for each category of socially supportive activity and for its three components rated by six experts. The expert panel members used a 4-point scale (1 = strongly disagree; 4 = strongly agree) to rate the evaluation items. The panel members strongly agreed all nine categories of socially supportive activities (SSA) were appropriate categorized and should be included, the mean ranged from 3.84 to 4.00. From 66.7% to 100% of the panel members agreed that for each category of SSA, "This item is clearly worded." But, the socially supportive activity category 5, the evaluation item "involvement by outside formal organization," had a lower percent of agreement (66.7%, mean 2.83), compared to the rest of the eight SSA categories (percentages 83.3%-100%, mean 3.33-3.67). All six experts (100%) strongly agreed that the evaluation items "Rating response was appropriate" and "This item reflects content important to socially supportive activity". "This item is easily distinguished from others on the scale" was given a rating of 3 (agree) by 16.7% to 33.3% and a rating of 4 (strongly agree) by 50% to 83.3%, in terms of a total of 83.3% to 100% agreements (mean 3.33-3.83).

Four questions involving whether a person participates in the activity, how often, how meaningful, and how much enjoyment participating in the activity were evaluated by panel members. Except the question "How often do you participate?" all six experts strongly agreed (100%) that the questions "Do you participate this activity?" "How meaningful is participation to your life?' and "How much do you enjoy participation in it?" should be included, are clearly worded, and have an appropriate rating response. Additionally, these last three questions reflected the important content of SSA and were easily distinguished from others SSA.

Table 11 shows the rating 3 or 4 on a 4-point relevance scale for each item by six experts. Item-level CVI ranged from 0.67-1.00 with a mean item-CVI of 0.96. The score of scale-level CVI was 0.96. Thus, the values of the content validity index indicated that the questions on the SSAI were highly relevant.

To summarize the quantitative judgment by six experts, the discrepant scores on Tables 10 and 11 show that the socially supportive activity category 5 "Involvement by outside organization" and the question item "How often do you participate?" needed to be revised. "Involvement" and "outside formal organization" needed to be more carefully defined according to the qualitative information. As a result, the socially supportive activity category 5 has been changed to "Performances and visits by single or group organization in institution" in the pilot and main studies. To refine the concept of "frequency," the Chinese word for "time" was included in the question on "How often do you participation?" because "time" in Chinese includes the notion of date as well as frequency.

TABLE 10. Percentages, Mode and Means of Response to Expert Validity Questionnaire (N = 6)

	Strongly disagree	Disagree	Agree	Strongly agree	Mode	Mean
Socially supportive activity category 1 **(C1)** *Contact with family members and friends including visits and phone calls*						
a. This item should be included	0	0	0	100	4	4.00
b. This item is clearly worded	0	16.7	16.7	66.6	4	3.50
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	16.7	83.3	4	3.83
e. This item is easily distinguished from others on the index	0	16.7	16.7	66.6	4	3.50
Socially supportive activity category 2 **(C2)** *Chatting with acquaintances*						
a. This item should be included	0	16.7	0	83.3	4	3.67
b. This item is clearly worded	0	16.7	16.7	66.6	4	3.50
c. Rating response is appropriate	0	16.7	33.3	50.0	4	3.33
d. This item reflects content important to socially supportive activity	0	0	16.7	83.3	4	3.83
e. This item is easily distinguished from others on the index	0	16.7	33.3	50.0	4	3.33
Socially supportive activity category 3 **(C3)** *Holiday-related activities*						
a. This item should be included	0	0	0	100	4	4.00
b. This item is clearly worded	0	0	16.7	83.3	4	3.83
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	16.7	83.3	4	3.83
e. This item is easily distinguished from others on the index	0	0	16.7	83.3	4	3.83
Socially supportive activity category 4 **(C4)** *Cognitive games*						
a. This item should be included	0	0	16.7	83.3	4	3.83
b. This item is clearly worded	0	16.7	33.3	50.0	4	3.33
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	33.3	66.7	4	3.67
e. This item is easily distinguished from others on the index	0	0	33.3	66.7	4	3.67
Socially supportive activity category 5 **(C5)** *Involvement by outside formal organizations*						
a. This item should be included	0	0	0	100	4	4.00
b. This item is clearly worded	0	33.3	50.0	16.7	3	2.83
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	33.3	66.7	4	3.67
e. This item is easily distinguished from others on the index	0	0	33.3	66.7	4	3.67

(Continued)

TABLE 10. - *Continued*

	Strongly disagree	Disagree	Agree	Strongly agree	Mode	Mean
Socially supportive activity category 6 **(C6)** *Entertainment*						
a. This item should be included	0	0	0	100	4	4.00
b. This item is clearly worded	0	0	50	50	-	3.50
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	16.7	83.3	4	3.83
e. This item is easily distinguished from others on the index	0	0	16.7	83.3	4	3.83
Socially supportive activity category 7 **(C7)** *Pleasure trips*						
a. This item should be included	0	0	16.7	83.3	4	3.83
b. This item is clearly worded	0	0	33.3	66.7	4	3.67
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	33.3	66.7	4	3.67
e. This item is easily distinguished from others on the index	0	0	16.7	83.3	4	3.83
Socially supportive activity category 8 **(C8)** *Arts/crafts classes*						
a. This item should be included	0	0	16.7	83.3	4	3.83
b. This item is clearly worded	0	0	50	50	-	3.50
c. Rating response is appropriate	0	0	16.7	83.3	4	3.83
d. This item reflects content important to socially supportive activity	0	0	16.7	83.3	4	3.83
e. This item is easily distinguished from others on the index	0	0	16.7	83.3	4	3.83
Socially supportive activity category 9 **(C9)** *Religious activities*						
a. This item should be included	0	0	16.7	83.3	4	3.83
b. This item is clearly worded	0	16.7	16.7	66.6	4	3.50
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	33.3	66.7	4	3.67
e. This item is easily distinguished from others on the index	0	0	33.3	66.7	4	3.67
Question item 1 **(Q1)** *Do you participate this activity?*						
a. This item should be included	0	0	0	100	4	4.00
b. This item is clearly worded	0	0	16.7	83.3	4	3.83
c. Rating response is appropriate	0	0	16.7	83.3	4	3.83
d. This item reflects content important to socially supportive activity	0	0	16.7	83.3	4	3.83
e. This item is easily distinguished from others on the index	0	0	16.7	83.3	4	3.83

(Continued)

TABLE 10. - *Continued*

	Strongly disagree	Disagree	Agree	Strongly agree	Mode	Mean
Question item 2 **(Q2)** *How often do you participate?*						
a. This item should be included	0	16.7	33.3	50	4	3.33
b. This item is clearly worded	0	33.3	16.7	50.0	4	3.17
c. Rating response is appropriate	0	16.7	50.0	33.3	3	3.17
d. This item reflects content important to socially supportive activity	0	16.7	33.3	50.0	4	3.33
e. This item is easily distinguished from others on the index	0	0	33.3	66.7	4	3.67
Question item 3 **(Q3)** *How meaningful is participation to your life?*						
a. This item should be included	0	0	66.7	33.3	3	3.33
b. This item is clearly worded	0	0	66.7	33.3	3	3.33
c. Rating response is appropriate	0	0	50.0	50.0	-	3.50
d. This item reflects content important to socially supportive activity	0	0	50.0	50.0	-	3.50
e. This item is easily distinguished from others on the index	0	0	33.3	66.7	4	3.67
Question item 4 **(Q4)** *How much do you enjoy participation in it?*						
a. This item should be included	0	0	16.7	83.3	4	3.83
b. This item is clearly worded	0	0	33.3	66.7	4	3.67
c. Rating response is appropriate	0	0	33.3	66.7	4	3.67
d. This item reflects content important to socially supportive activity	0	0	16.7	83.3	4	3.83
e. This item is easily distinguished from others on the scale	0	0	16.7	83.3	4	3.83

Note. Ratings of 1 = strongly disagree; 2= disagree; 3= agree; 4= strongly agree. Dashes indicate the equal percentages of rating of same two scores.

TABLE 11. Ratings on Chinese Socially Supportive Activity Inventory: Item Rated 3 or 4 on a 4-Point Relevance Scale (N= 6)

	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	# in agreement	Item CVI
C1-a	x	x	x	x	x	x	6	1.00
C1-b	x	x	-	x	x	x	5	0.83
C1-c	x	x	x	x	x	x	6	1.00
C1-d	x	x	x	x	x	x	6	1.00
C1-e	x	x	x	x	x	x	6	1.00
C2-a	x	x	x	-	x	x	5	0.83
C2-b	x	x	x	-	x	x	5	0.83
C2-c	x	x	x	-	x	x	5	0.83
C2-d	x	x	x	x	x	x	6	1.00
C2-e	x	x	x	-	x	x	5	0.83
C3-a	x	x	x	x	x	x	6	1.00
C3-b	x	x	x	x	x	x	6	1.00
C3-c	x	x	x	x	x	x	6	1.00
C3-d	x	x	x	x	x	x	6	1.00
C3-e	x	x	x	x	x	x	6	1.00
C4-a	x	x	x	x	x	x	6	1.00
C4-b	x	x	-	x	x	x	5	0.83
C4-c	x	x	x	x	x	x	6	1.00
C4-d	x	x	x	x	x	x	6	1.00
C4-e	x	x	x	x	x	x	6	1.00
C5-a	x	x	x	x	x	x	6	1.00
C5-b	-	x	x	-	x	x	4	0.67
C5-c	x	x	x	x	x	x	6	1.00
C5-d	x	x	x	x	x	x	6	1.00
C5-e	x	x	x	x	x	x	6	1.00
C6-a	x	x	x	x	x	x	6	1.00
C6-b	x	x	x	x	x	x	6	1.00

(Continued)

TABLE 11. - *Continued*

	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	# in agreement	Item CVI
C6-c	x	x	x	x	x	x	6	1.00
C6-d	x	x	x	x	x	x	6	1.00
C6-e	x	x	x	x	x	x	6	1.00
C7-a	x	x	x	x	x	x	6	1.00
C7-b	x	x	x	x	x	x	6	1.00
C7-c	x	x	x	x	x	x	6	1.00
C7-d	x	x	x	x	x	x	6	1.00
C7-e	x	x	x	x	x	x	6	1.00
C8-a	x	x	x	x	x	x	6	1.00
C8-b	x	x	x	x	x	x	6	1.00
C8-c	x	x	x	x	x	x	6	1.00
C8-d	x	x	x	x	x	x	6	1.00
C8-e	x	x	x	x	x	x	6	1.00
C9-a	x	x	x	x	x	x	6	1.00
C9-b	x	x	-	x	x	x	5	0.83
C9-c	x	x	x	x	x	x	6	1.00
C9-d	x	x	x	x	x	x	6	1.00
C9-e	x	x	x	x	x	x	6	1.00
Q1-a	x	x	x	x	x	x	6	1.00
Q1-b	x	x	x	x	x	x	6	1.00
Q1-c	x	x	x	x	x	x	6	1.00
Q1-d	x	x	x	x	x	x	6	1.00
Q1-e	x	x	x	x	x	x	6	1.00
Q2-a	x	x	-	x	x	x	5	0.83
Q2-b	-	x	-	x	x	x	4	0.67
Q2-c	x	x	-	x	x	x	5	0.83
Q2-d	x	x	-	x	x	x	5	0.83

(Continued)

TABLE 11. - *Continued*

	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	# in agreement	Item CVI
Q2-e	x	x	x	x	x	x	6	1.00
Q3-a	x	x	x	x	x	x	6	1.00
Q3-b	x	x	x	x	x	x	6	1.00
Q3-c	x	x	x	x	x	x	6	1.00
Q3-d	x	x	x	x	x	x	6	1.00
Q3-e	x	x	x	x	x	x	6	1.00
Q4-a	x	x	x	x	x	x	6	1.00
Q4-b	x	x	x	x	x	x	6	1.00
Q4-c	x	x	x	x	x	x	6	1.00
Q4-d	x	x	x	x	x	x	6	1.00
Q4-e	x	x	x	x	x	x	6	1.00
Proportion Relevant:							Mean I-CVI =	62.64/65=0.96
	63/65= 0.97	65/65= 1.0	58/65= 0.89	59/65= 0.91	65/65 = 1.0	65/65 = 1.0		Mean expert proportion (SCVI/Ave) =5.77/6 = 0.96

Note. Ratings of 1 = strongly disagree; 2= disagree; 3= agree; 4= strongly agree. Dashes indicate ratings of 1 or 2. CVI = Content Validity Index. I-CVI = Item-level Content Validity Index. S-CVI = Scale-level Content Validity Index. SCVI/Ave = Scale-level Content Validity Index, averaging agreement calculation method. SCVI/Ave indicates the average of the I-CVIs for all items on the scale (Polit & Beck, 2006).

Reliability of the SSAI

Among the nine categories of socially supportive activities (SSA), the category of art/craft classes was removed from advanced statistical analysis because this activity was not provided at the study site. Therefore, a total eight categories of socially supportive activities with three components of SSA for each category, frequency, meaningfulness, and enjoyment in participation, yielded 24 paired samples statistics over a two-week period. Table 12 shows that test-retest reliability from a sample of 10 participants yielded stability coefficients of 0.76 to 1.00 for the total SSA, a stability coefficient of 1.00 for the component of frequency, stability coefficients of 0.76 - 1.00 for the component of meaningfulness, and stability coefficients of 0.78 – 1.00 for the component of enjoyment. There were 15 perfect correlation coefficients. Two-tail paired-sample t-test showed that no statistically significant difference between participants was found over time ($p > 0.05$). Thus, acceptance of content validity index and stability reliability supported that the SSAI could now be confidently used to the main study and relative studies in future.

Summary

The results of pilot study one testing the Chinese version of Self-Transcendence Scale clearly confirmed that it is a cultural, reliable translation instrument. In the second pilot study, the psychometric properties of the Chinese Socially Supportive Activity Inventory (SSAI) were also validated, demonstrating it also as a cultural, reliable instrument. Both instruments are appropriate to be utilized in future studies. The following section continues with discussion of the results of main study.

TABLE 12. Test-Retest Statistics for the Three Components of Each Socially Supportive Activity

	rho	Mean (SD) score			
	(T1-T2)	Test (T1)	Retest (T2)	Difference	P
Component 1: Frequency					
Contact with family members and friends including visits and phone calls	1.00	5.50 (1.72)	5.50 (1.72)	0.00	-
Chatting with acquaintances	1.00	8.22 (2.33)	8.22 (2.33)	0.00	-
Holiday-related activities	1.00	3.40 (0.84)	3.40 (0.84)	0.00	-
Cognitive games	1.00	5.67 (4.16)	5.67 (4.16)	0.00	-
Involvement by outside formal organizations	1.00	3.67 (0.50)	3.67 (0.50)	0.00	-
Entertainment	1.00	5.75 (0.89)	5.75 (0.89)	0.00	-
Pleasure trips	1.00	1.67 (0.82)	1.67 (0.82)	0.00	-
Religious activities	1.00	9.00 (0.00)	9.00 (0.00)	0.00	-
Component 2: Meaningfulness					
Contact with family members and friends including visits and phone calls	0.76	3.70 (0.48)	3.80 (0.42)	-0.10	0.34
Chatting with acquaintances	1.00	3.33 (0.71)	3.33 (0.71)	0.00	-
Holiday-related activities	0.96	3.30 (0.82)	3.40 (0.70)	-0.10	0.34
Cognitive games	1.00	2.33 (0.58)	2.33 (0.58)	0.00	-
Involvement by outside formal organization	0.95	3.11 (0.93)	3.00 (1.00)	0.11	0.35
Entertainment	1.00	2.75 (0.89)	2.75 (0.89)	0.00	-
Pleasure trips	0.90	2.33 (1.37)	2.50 (1.23)	-0.17	0.36
Religious activities	0.93	3.00 (1.32)	2.89 (1.27)	0.11	0.35
Component 3: Enjoyment					
Contact with family members and friends including visits and phone calls	1.00	4.00 (0.00)	4.00 (0.00)	0.00	-
Chatting with acquaintances	0.99	3.33 (1.12)	3.56 (0.73)	-0.23	0.17
Holiday-related activities	0.86	3.50 (0.71)	3.40 (0.70)	0.10	0.34
Cognitive games	1.00	3.00 (1.00)	3.00 (1.00)	0.00	-
Involvement by outside formal organizations	1.00	3.22 (0.67)	3.22 (0.67)	0.00	-
Entertainment	0.78	3.50 (0.54)	3.38 (0.52)	0.12	0.35
Pleasure trips	1.00	3.00 (1.27)	3.00 (1.27)	0.00	-
Religious activities	0.85	3.33 (1.00)	3.44 91.01)	-0.11	0.35

Statistically significant level > 0.05

Main Study of the Cultural-Psychosocial Model for Depression

Demographic Characteristics of the Study Sample

A total of 196 participants completed survey questionnaires. Table 13 displays the detailed demographic characteristics of the study sample for the cultural-psychosocial model. Of 196 participants, the gender of the participants was fairly even split: only 2% more females (n = 100) than males (n = 96). They ranged in age from 65 to 98 years, with a mean age of 79.25 (SD = 7.40).

With regards to education, 25% of the participants were illiterate and 7.1% reported having no formal education but literate, 36.2% of the participants had enrolled in elementary school, 11.7% and 12.8% of the participants had enrolled in junior high and senior high school respectively, and 6.1% of the participants had a bachelor degree. Only 1% of participants had a graduate degree. The number of years attended formal school ranged from 0 to 17, with a mean years of 5.36 (SD = 4.85). The majority of participants were Fujianese (69.9%) followed by Mainlander (24%) and Hakka (6.1%).

One hundred and twenty-two participants (62.2%) were widowed, while 33 were single and 34 were married, accounting for approximately 34% of the participants. Religious beliefs varied. Approximately 22% of participants had no preference in religious. Buddhist (31.6%) was the most frequently reported religion, followed by traditional believers (17.2%); and Christian was least reported (8.2%).

The majority of participants rated their financial status as “just make ends meet” (63.8%), 19.9% of the participants reported “poor,” and 16.3% reported “have some savings.”

The number of children varied, ranged from 0 to 10 with a mean of 2.99 (SD = 2.14). The average number of children was 3. Over one third of the participants had 1-3 or 4-6 children. Of 177 participants who had living birth- or adopted children, the great majority (149 participants, 76%) expected their children to visit them during their institutionalization. Among those participants, nearly 58% of participants believed that the frequency of visits should be "as many as they can," followed by "once a week" (18.3%). Approximately 3% of participants expected their children to visit them "daily." Among 196 participants, only six participants (3.1%) were diagnosed with depression and taking antidepressant medication.

TABLE 13. Demographic Characteristics of the Study Sample for the Cultural Psychosocial Model (N =196)

	Mean	SD	N	%
Gender				
Male			96	49.0
Female			100	51.0
Age (65-98 years old)	79.25	7.40		
65-69			19	9.7
70-74			36	18.5
75-79			48	24.6
80-84			40	20.5
85-89			34	17.4
90-94			16	8.2
95 over			2	1.0
Years of Formal Education (0-17 years)	5.36	4.85		
Education level				
Illiterate (0 year)			49	25.0
Literate, but no formal education			14	7.1
Elementary (1-6 years)			71	36.2
Junior high (7-9 years)			23	11.7
Senior high (10-12 years)			25	12.8
Bachelor (13-16 years)			12	6.1
Graduate (16-17 years)			2	1.0
Ethnicity				
Mainlander			47	24.0
Fujianese			137	69.9
Hakka			12	6.1

(Continued)

TABLE 13. - *Continued*

	Mean	SD	N	%
Martial status				
Single			33	16.8
Married			34	17.3
Widowed			122	62.2
Divorced			7	3.6
Religious beliefs				
Buddhist			62	31.6
Traditional believer			34	17.3
Taoist			21	10.7
Catholic			20	10.2
Christian			16	8.2
No preference			43	21.9
Financial status				
Poor			39	19.9
Just make ends meet			125	63.8
Have some savings			32	16.3
Number of children (0-10)	2.99	2.14		
0			38	19.6
1-3			72	37.1
4-6			74	38.1
7-10			10	5.2
Expectations of children visits				
Yes			149	84.2
No			28	15.8
Expected frequency of visits by children				
As many as they can			88	57.5
Daily			4	2.6
Once a week			28	18.3
2-3 times a week			8	5.2
Once a month			8	5.2
2-4 times a month			3	2.0
Once per three months			2	1.3
During holidays			3	2.0
Others (once a year, Chinese New Year)			9	5.9
Diagnosed Depression				
Yes			6	3.1
No			190	96.9

Characteristics of Institutionalization Histories of the Study Sample

Characteristics of institutionalization history, the first of the study's proposed variables, are illustrated in Table 14. A total of eight elder care institutions were invited to participate in the

present study. Eight elder care institutions contained 3 senior homes/centers (equivalent to congregate care facilities in US), 2 intermediate care nursing homes, and 3 mixed skilled and intermediate care nursing homes. More participants were recruited from either senior homes/centers or mixed skilled and intermediate care nursing homes. Of a total of 196 participants, 70 participants (35.7%) were recruited from senior home/centers, 57 participants (29.1%) from skilled nursing homes, and 69 participants (35.2%) from mixed skilled and intermediate care nursing homes. A wide range of the length of stay in the institution was reported, from 1 to 324 months, with a mean months of 43.75 (SD = 56.18). One fifth of the participants were institutionalized less or equal to six months and another fifth between 25 and 48 months (equal to 2-4 years).

Prior to admission, nearly 47% of the participants were neither willing nor unwilling to be institutionalized, deferring instead to the decision made by their children. After a period of institutionalization, the percentage of the participants who remained neutral dropped to 18.9%. Also, prior to admission, a large group, almost one third of the participants were “strongly willing” to be institutionalized. In contrast, before admission, percentages of the participants “strongly unwilling” and “moderate unwilling” to be institutionalized (8.2% and 1.5%, respectively), remain nearly the same after admission (8.7% and 1.5%, respectively). The mean score of willingness to be institutionalized prior to admission was 4.88 (SD = 1.79) on a 7-point ranking scale and a mean score of 5.58 (SD = 1.87) for the willingness to remain institutionalized after admission. The data shows that the institutionalized elders tended to have neutral attitude towards institutional placement (score equal to 4 out of 7-point scale) prior to admission, whereas mildly improved acceptance of institutionalization after a period of admission.

However, after a period of institutionalization, the percentage of the strong willingness to remain institutionalized increased 18.4% from 32.1% to 50.5%. Subtracting the willingness to remain institutionalized from the willingness to be institutionalized represents the participant's attitude towards institutionalization. The attitudes of 54.4% of the participants did not change after a period of institutionalization. But over one third of the participants had improved their willingness slightly or moderately. For those whose willingness to remain institutionalized declined (n = 18), 2.6% of the participants (n = 5) for "slightly worse," 6.2% (n = 12) for moderately worse, and 0.5% of the participants (n = 1) for "much worse."

TABLE 14. Characteristics of Institutionalization History of the Study Sample (N = 196)

		Mean	SD	N	%
Type of elder care institution					
Senior home/center				70	35.7
Intermediated care nursing home				57	29.1
Mixed skilled and intermediate care nursing home				69	35.2
Length of stay in the institution(1-324 months)		43.75	56.18		
1-6				39	20.1
7-12				22	11.3
13-18				21	10.8
19-24				14	7.2
25- 48 (2-4 years)				41	21.1
49-72 (4-6 years)				25	12.9
73-120 (6-10 years)				17	8.8
121-324 (over 10 years)				15	7.7
Willingness to be institutionalized (on a scale from 1-7)		4.88	1.79		
Strongly unwilling	*(1)*			16	8.2
Moderately unwilling	*(2-3)*			3	1.5
Neither	*(4)*			92	46.9
Moderately willing	*(5-6)*			21	11.3
Strongly willing	*(7)*			63	32.1
Willingness to remain institutionalized (on a scale from 1-7)		5.58	1.87		
Strongly unwillingly	*(1)*			17	8.7
Moderately unwilling	*(2-3)*			3	1.5
Neither	*(4)*			37	18.9
Moderately willing	*(5-6)*			40	20.4
Strongly willing	*(7)*			99	50.5

TABLE 14. - *Continued*

		Mean	SD	N	%
Attitude towards institutionalization					
Slightly improved	*(1-2)*			30	15.5
Moderately improved	*(3-4)*			37	19.2
Much improved	*(5-6)*			3	1.6
No change	*(0)*			105	54.4
Slightly worse	*(-1 to -2)*			5	2.6
Moderately worse	*(-3 to -4)*			12	6.2
Much worse	(-5 to -6)			1	0.5

Test of Originally Hypothesized Model

Univariate Analysis of the Proposed Variables

The proposed variables in this study included institutionalization histories, perceived stress, self-transcendence, participation in socially supportive activities, and depression. Table 15 illustrates the measures of central tendency for each proposed variable, including the possible and actual score ranges, means, standard deviations, medians, and modes, which describes the shape of data distribution.

Institutionalization Histories

An elder's acceptance of institutionalization was measured how institutionalized elders felt about institutionalization prior to and after admission, and named differently. The mean values of "willingness to be institutionalized" was 4.48 (SD = 1.79) and 5.58 (SD = 1.87) for "willingness to remain institutionalized," with a median of 4 and a mode of 4 for both of them. The length of stay ranged from 1 to 324 months, with a mean of 43.54 months (SD = 56.18), a median of 25.00 months, and a mode of 1 month; the average of stay length was over three and half years.

TABLE 15. Univariate Analysis of the Proposed Variables (N = 196)

Proposed variables	Possible range	Observed range	Mean (SD)	Median	Mode	α
Length of Stay	Varied	1-324	43.75 (56.18)	25.00	1	-
Willingness to be institutionalized	1-7	1-7	4.88 (1.79)	4	4	-
Willingness to remain institutionalized	1-7	1-7	5.58 (1.87)	7	7	-
Filial responsibility expectation	0-10	1-10	7.37 (3.33)	9	10	-
Perceived Stress Scale	0-40	0-32	11.86 (6.85)	11	8	0.75
Chinese Self-Transcendence Scale	15-60	22-60	42.89 (7.70)	44	44	0.78
Socially Supportive Activity Inventory	1-9	1-9	4.80 (1.86)	4.78	5	-
Frequency	1-4	1-4	3.12 (0.59)	3.13	3	-
Meaningfulness	1-4	1-4	3.25 (0.59)	3.33	3	-
Enjoyment						
Geriatric Depression Scale	0-15	0-15	5.12	4	4	0.78

Filial Responsibility Expectation

The observed range was from 1 to 10, with a mean of 7.37 (SD = 3.33), and a median of 9. The mode, which is the most frequent value rating by participants, was 10. The data indicate that the participants in this study held moderate filial expectations of their children, but for extremely expectation of filial responsibility was the most frequent response.

Perceived Stress

In this study, an observed score ranged from 0 to 32 with a mean of 11.86 (SD = 6.85), indicated the participants perceived mild stress in this study.

Self-transcendence

In this study, the observed score ranged from 22 to 60. This study had a mean of 42.89 (SD = 7.70) with both values of median and mode at 44. These data show that the participants experienced moderate self-transcendence.

Socially Supportive Activity

Nine categories of socially supportive activities with three components for each category were evaluated by each participant. The mean scores of 4.80 (SD = 1.86), 3.12 (SD = 0.59), and 3.25 (SD = 0.56) represented for the frequency, meaningfulness, and enjoyment components of the socially supportive activities, respectively. Participants most often reported "equal or more than 3 times per month" (mode 5) with respect to the frequency of participation. The scores of mode at 3 in both the meaningfulness and enjoyment components indicate that institutionalized elders participating in socially supportive activities "somewhat" meaningful to their lives and "somewhat" enjoyable.

Depression

The possible total score ranged from 0 to 15, and was the observed range for this study as well. A score of 5 suggests a mild depression. Study data showed a mean of 5.12 (SD = 3.43), indicating a generally depressed mood in this study sample. Of 196 participates, 95 participants were defined as depressed by the screening result of C-GDS. The prevalence was 48.5% in this study.

Intercorrelations Among the Proposed Variables

Table 16 demonstrates the intercorrelations among the potential predictors and depression. Depression was significantly negative correlated with an elder's willingness to be

TABLE 16. Inter-correlations Among the Proposed Variables (N = 196)

Proposed variables	WI	WRI	LOS	FRE	PS	ST	SSA-Freq	SSA-Mean	SSA-Enjo	DP
WI	1.00									
WRI	0.54**	1.00								
LOS	0.15*	0.28**	1.00							
FRE	-0.12	-0.02	0.05	1.00						
PS	-0.19**	-0.34**	-0.16*	0.03						
ST	0.29**	0.37**	0.13	0.06	-0.61**					
SSA-Freq	-0.02	0.03	-0.13	0.00	-0.22**	0.22**				
SSA-Mean	0.09	0.18*	0.13	0.17*	-0.15*	0.28**	0.27**			
SSA-Enjo	0.08	0.18**	0.15*	0.17*	-0.18*	0.31**	0.30**	0.85**		
DP	-0.29**	-0.44**	-0.14	-0.07	0.59**	-0.68**	-0.24**	-0.28**	-0.29**	1.00

Note. WI = Willingness to be institutionalized. WRI = Willingness to Remain Institutionalized.
LOS = Length of Stay in the Institution. FRE = Filial Responsibility Expectation. PS = Perceived Stress.
ST = Self-Transcendence. SSA-Freq = Frequency Component of Socially Supportive Activity. SSA-Mean = Meaningfulness Component of Socially Supportive Activity. SSA-Enjo = Enjoyment Component of Socially Supportive Activity.
*Correlation is significant at the $p < 0.05$ (2-tailed). ** Correlation is significant at the $p < 0.01$ (2-tailed)

institutionalized (r = -0.29), an elder's willingness to remain institutionalized (r = -0.44), self-transcendence (r = -0.68), the frequency component of socially supportive activities (r = -0.24), the meaningfulness component of socially supportive activities (r = -0.28), and the enjoyment component of socially supportive activities (r = -0.29); and significantly positive correlated with perceive stress (r = 0.59).

An elder's willingness to be institutionalized had significantly positive correlated with an elder's willingness to remain institutionalized (r = 0.54), the length of stay in the institution (r = 0.15), and self-transcendence (r = 0.29); and negative correlated with perceived stress (r = -0.19). An elder's willingness to remain institutionalized was significantly negative correlated with perceived stress (r = -0.34) and positive correlated with the length of stay in the institution (r = 0.28), self-transcendence (r = 0.37), the meaningfulness and enjoyment components of socially supportive activities (r = 0.18). An elder's expectation of filial responsibility was associated with meaningfulness and enjoyment components of socially supportive activities (r = -0.17). An elder's perception of stress being institutionalization was significantly negative correlated with self-transcendence (r = -0.61) and all components of socially supportive activities (r = -0.22 for frequency; r = -0.15 for meaningfulness; r = -0.18 for enjoyment).

Self-transcendence was significantly positive associated with participation in socially supportive activities (r = 0.22 for frequency; r = 0.28 for meaningfulness; r = 0.31 for enjoyment). The frequency component of socially supportive activities was significant associated with the meaningfulness and enjoyment components of socially supportive activities (r = 0.27 and 0.30 respectively). As expected, the meaningful component of socially supportive activities

was strongly associated with the enjoyment component of socially supportive activities (r = 0.85).

Results of the Path Analysis

The hypothesized causal model was tested by using a path analysis (Figure 1). After the examination of assumptions underlying regression, a set of multiple regression was performed to examine the predictive relationships between independent variables (predictor) and dependent variable (outcome). The first step of path analysis was to calculate the path coefficient for each direct effect of independent variable in predicting dependent variable. In the hypothesized model, the direct effects were the path of willingness to be institutionalized to depression ($P_{w,d}$), the path of willingness to remain institutionalized to depression ($P_{r,d}$), the path of length of stay in the institution to depression ($P_{l,d}$), the path of perceived stress to depression ($P_{p,d}$), and the path of self- transcendence to depression ($P_{s,d}$). Each path model corresponded with one research hypothesis was examined.

The moderating effect of filial responsibility expectation and socially supportive activity and the mediator of self-transcendence were analyzed separately. Although either the standardized or the unstandardized regression coefficient can be reported the value of the path coefficient, the use of standardized coefficient facilities the determination in which independent variable has the greatest direct effect on the dependent variable (Norris, 2005). Thus, the standardized regression coefficient in terms of the beta weight was reported the correlation between two variables.

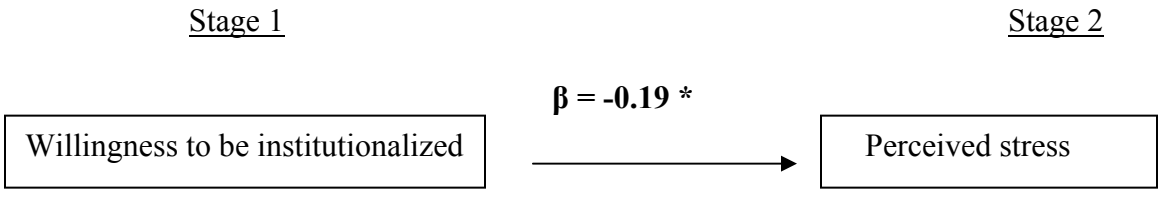
The second step of path analysis was to calculate the indirect effect between two variables. There was no non-causal component of correlation in this model. Next, the total effect

for each independent variable was calculated by summing the direct effect and the indirect effect of independent variable on depression to determine the greatest effect on the depression. Finally, a final model was modified based on the results of path analysis and retested by using stepwise multiple regression.

Step 1a: Regression Testing on Stage Two Variable Perceived Stress

Research Hypothesis 1: *The lower the degree of acceptance of institutionalization reported by an elder, the higher the level of perceived stress.*

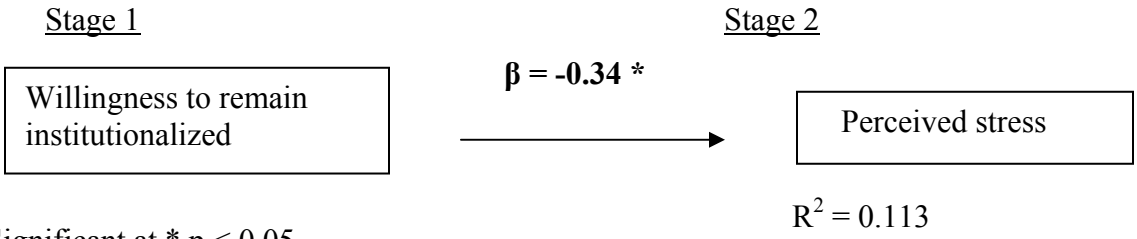
Two regression analyses were identified for this research hypothesis. The variable of the degree of acceptance of institutionalization contained two aspects of acceptance of institutionalization which were the willingness to be institutionalized and the willingness to remain institutionalized. Thus, the relationship of the degree of acceptance of institutionalization to perceived stress was separately examined in two regression analysis. Stage two variable an elder's perception of stress (PS) regressed on stage one variables an elder's willingness to be institutionalized (WI) and an elder's willingness to remain institutionalized (WRI). Figure 4 displays that an elder's willingness to be institutionalized had a significantly negative direct effect on an elder's perception of stress ($\beta = -0.19$, $p = 0.01$), accounting for 3.7% of variance in predicting perceived stress.



Note. Significant at * $p < 0.05$

FIGURE 4. Path Diagram for Hypothesis Testing Willingness to Be Institutionalized on Perceived Stress

Figure 5 displays that an elder's willingness to remain institutionalized was also significantly negative direct effect on an elder's perception of stress (β = -0.34, p = 0.00), accounting for 11.3% of variance in predicting perceived stress. Both Figure 15 and 16 indicate the first research hypothesis was supported.

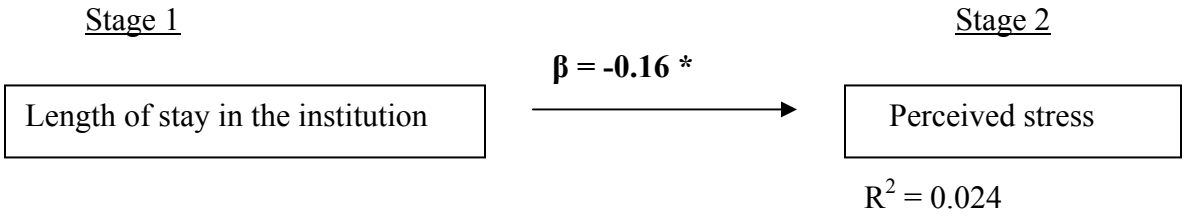


Note. Significant at * p < 0.05

FIGURE 5. Path Diagram for Hypothesis Testing Willingness to Remain Institutionalized on Perceived Stress

Research Hypothesis 2: The shorter the length of stay in the institution, the higher the level of perceived stress by an elder

One regression equation was identified which stage two variable an elder's perception of stress regressed on stage one variable the length of stay in the institution (LOS). Figure 6 displays a significantly negative direct effect of the length of stay in the institution on perceived stress (β = -0.16, p = 0.03), accounting for 2.4% of variance in predicting perceived stress. This hypothesis was supported.



Note. Significant at * p < 0.05

FIGURE 6. Path Diagram for Hypothesis Testing the Length of Stay in the Institution on Perceived Stress

Research Hypothesis 3: An elder's expectation of filial responsibility is a moderator that influences the strength of the degree of acceptance of institutionalization-perception of stress relationship

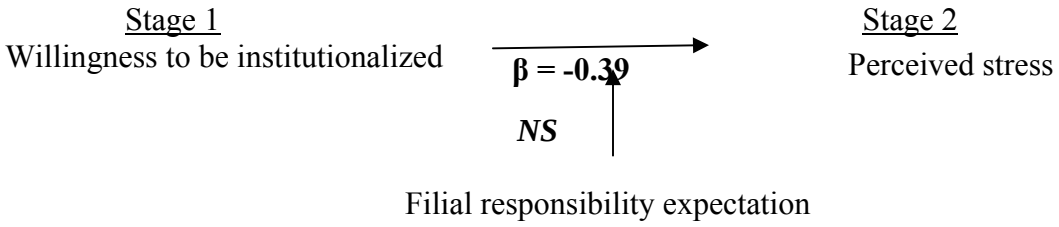
To test a moderator effect, a hierarchical multiple regression was performed to answer the research hypothesis. The variables were entered in two blocks. In the first step, the independent variable (accepting institutionalization) and the moderator (filial responsibility expectation; FRE) were entered into the block 1 as predictors of the outcome variable (perceived stress). Next, the interaction term (independent variable × moderator) which represented the moderator effect was entered into the block 2. In other words, an interaction term (willingness to be institutionalized ×filial responsibility expectation or willingness to remain institutionalized ×filial responsibility expectation, respectively) was entered in a separate step. The presence of moderator effect occurred when the interaction term explained a statistically significant amount of variance in the dependent variable (Bennett, 2000).

Table 17 presents unstandardized regression coefficients (B), standard error estimates (SE), standardized regression coefficients (β), and *p* values of the main and moderator effects. The results show that there was a main effect of willingness to be institutionalized (β= -0.21, p = 0.00) in predicting perceived stress, accounting for 4.3% of variance in perceived stress, F (2, 190) =4.28, p = 0.02. There was no significant interaction effect of filial responsibility expectation on willingness to be institutionalized (β= 0.05, p = 0.84), accounting for 4.3% of variance in predicting perceived stress. Figure 7 demonstrates the path diagram for the moderator hypothesis of filial responsibility expectation on willingness to be institutionalized in predicting perceived stress.

TABLE 17. Moderator Effect of Filial Responsibility Expectation on Willingness to be Institutionalized in Predicting Perceived Stress (N= 193)

	B	SE B	β	*p*
Step 1				
Willingness to be institutionalized (WI)	-0.79	0.27	-0.21*	0.00
Filial responsibility expectation (FRE)	0.01	0.15	0.01	0.94
Step 2				
Willingness to be institutionalized	-0.91	0.62	-0.24	0.15
Filial responsibility expectation	-0.07	0.43	-0.04	0.87
WI × FRE	0.02	0.08	0.05	0.84

Note. $R^2 = 0.043$ for Step 1; $R^2 = 0.043$ for Step 2. *B* = unstandardized coefficients. *SE* = standard error estimates. β = standardized coefficients. *p* = significant level at > .05



Note. NS = Non statistically significant

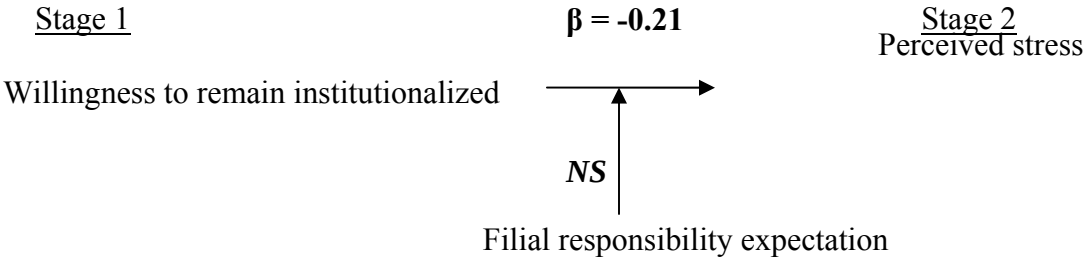
FIGURE 7. Path Diagram for Moderator Hypothesis of Filial Responsibility Expectation on Willingness to be Institutionalized

Table 18 displays the summary of the moderator effect of filial responsibility expectation on willingness to remain institutionalized in predicting perceived stress. The results show that there was a main effect of willingness to remain institutionalized (β = -0.35, *p* = 0.00) in predicting perceived stress, accounting for 12.1 % of variance in perceived stress, F (2, 190) = 13.06, *p* = 0.00. There was no significant interaction effect of filial responsibility expectation on willingness to remain institutionalized (β= 0.07, *p* = 0.74) in predicting perceived stress, accounting for 12.1% of variance in predicting perceived stress. Figure 8 demonstrates the path diagram for the moderator hypothesis of filial responsibility expectation on willingness to remain institutionalized in predicting perceived stress.

TABLE 18. Moderator Effect of Filial Responsibility Expectation on Willingness to Remain Institutionalized in Predicting Perceived Stress (N= 193)

	B	SE B	β	*p*
Step 1				
Willingness to remain institutionalized	-1.25	0.25	-0.35**	0.00
Filial responsibility expectation	0.05	0.14	0.02	0.75
Step 2				
Willingness to remain institutionalized	-1.40	0.51	-0.39**	0.01
Filial responsibility expectation	-0.07	0.37	-0.03	0.85
WR × FRE	0.02	0.06	0.07	0.74

Note. $R^2 = 0.121$ for Step 1; $R^2 = 0.121$ for Step 2. *B* = unstandardized coefficients. SE = standard error estimates. β = standardized coefficients. *p* = significant level at .05



Note. NS = Non statistically significant

FIGURE 8. Path Diagram for Moderator Hypothesis of Filial Responsibility Expectation on Willingness to Remain Institutionalized

Research Hypothesis 4: An elder's expectation of filial responsibility is a moderator that influences the strength of the length of stay in the institution-perception of stress relationship

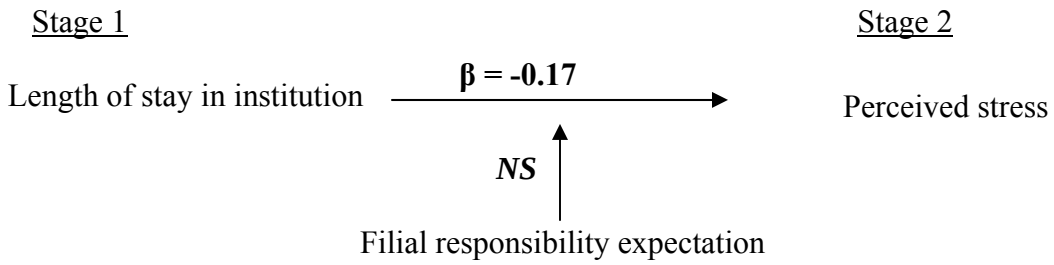
A hierarchical multiple regression was also run to test the hypothesis 4. Table 19 shows that there was a main effect of length of stay in the institution (β= -0.17, *p* = 0.02), accounting for 2.9% of variance in predicting perceived stress. There was no significant interaction effect of filial responsibility expectation on willingness to remain institutionalized (β= 0.18, *p* = 0.43), accounting for 3.2% of variance in predicting perceived stress. Figure 9 demonstrates the path diagram for the moderator hypothesis of filial responsibility expectation on length of stay in the institution in predicting perceived stress.

In summary, an elder's expectation of filial responsibility was not a moderator to affect an elder's perception of stress among institutionalized Taiwanese elders. In other words, an elder's expectation of filial responsibility might not impact on the negative relationship between the acceptance of institutionalization and the perceived stress and between the length of stay in the institution and the perceived stress. Yet, the acceptance of institutionalization and the length of stay in the institution had a main effect in predicting perceived stress. Thus, hypotheses 3 and 4 were not supported.

TABLE 19. Moderator Effect of Filial Responsibility Expectation on Length of Stay in the Institution in Predicting Perceived Stress (N= 191)

	B	SE B	β	*p*
Step 1				
Length of stay in the institution	-0.82	0.35	-0.17*	0.02
Filial responsibility expectation	0.10	0.15	0.05	0.51
Step 2				
Length of stay in the institution	-1.40	0.82	-0.28	-1.71
Filial responsibility expectation	-0.15	0.34	-0.07	0.67
Length of stay in the institution × Filial responsibility expectation	0.08	0.10	0.18	0.43

Note. $R^2 = 0.029$ for Step 1; $R^2 = 0.032$ for Step 2; *B* = unstandardized coefficients. SE =standard error estimates. β = standardized coefficients. *p* = significant level at .05



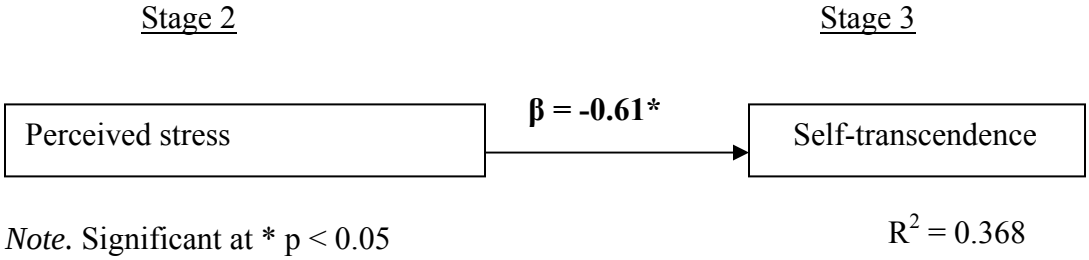
Note. NS = Non statistically significant

FIGURE 9. Path Diagram for Moderator Hypothesis of Filial Responsibility Expectation on Length of Stay in the Institution

Step 1b: Regression Testing on Stage Three Variable Self-Transcendence

Research Hypothesis 5: The higher the level of perceived stress reported by an elder, the lower the level of self-transcendence

One regression analysis was identified with stage three variable an elder self-transcendence (ST) regressed on stage two variable an elder's perception of stress (ST). Figure 10 presents that perceived stress had a negative direct effect on self-transcendence ($\beta = -0.61$, $p = 0.00$), accounting for 36.8% of variance in predicting self-transcendence. This hypothesis was supported.



Note. Significant at * $p < 0.05$

FIGURE 10. Path Diagram Hypothesis Testing Perceived Stress on Self-transcendence

Research Hypothesis 6: The greater amount of participation in socially supportive activity moderates the strength of a negative relationship between perceived stress and self-transcendence

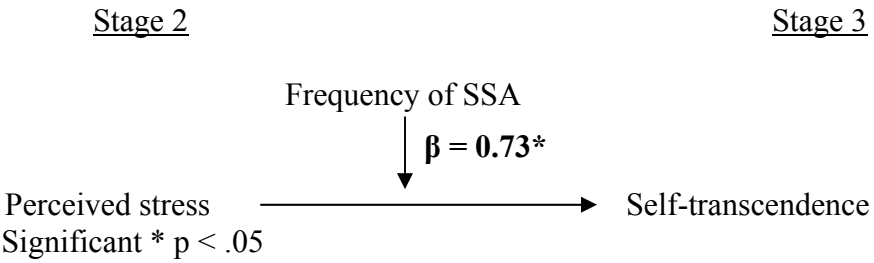
A hierarchical multiple regression was run three times to examine the moderator effect of participation in socially supportive activity (SSA) on perceived stress in predicting self-transcendence due to three components contain in each SSA. Each component of SSA was separately tested its moderator effect on perceived stress in predicting self-transcendence. Table 20 displays unstandardized coefficients, standard error estimates, standardized coefficients, and *p* values of moderator and main effects. The results show that there was a main effect of perceived

stress (β = -0.59, *p* = 0.00), accounting for 37.6% of variance in predicting self-transcendence F (2, 193) = 58.09, *p* = 0.00. There was a significant interaction effect of frequency of SSA on perceived stress (β = 0.73, *p* = 0.01), accounting for 40.1% of variance in predicting self-transcendence, F (3, 192) = 42.93, *p* = 0.00. Figure 11 demonstrates the path diagram for the moderator hypothesis of frequency of SSA on perceived stress in predicting self-transcendence.

TABLE 20. Moderator Effect of Frequency of Socially Supportive Activity on Perceived Stress in Predicting Self-Transcendence (N = 196)

	B	SE B	β	*p*
Step 1				
Perceived stress	-0.66	0.07	-0.59*	0.00
Frequency of socially supportive activity	0.60	0.38	0.09	0.12
Step 2				
Perceived stress	-1.45	0.28	-1.29*	0.00
Frequency of socially supportive activity	-1.55	0.84	-0.24	0.06
Perceived stress × Frequency of socially supportive activity	0.17	0.06	0.73*	0.01

Note. R^2 = 0.376 for Step 1; R^2 = 0.401 for Step 2. *B* = unstandardized coefficients. SE = standard error estimates. β = standardized coefficients. *p* = significant level at .05



Note. Significant * p < .05

FIGURE 11. Path Diagram for Moderator Hypothesis of Frequency of SSA on Perceived Stress

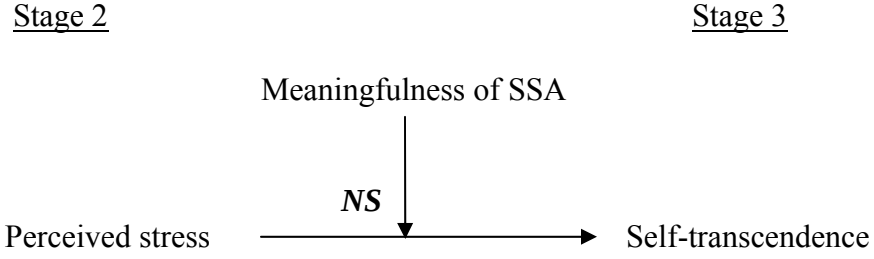
Table 21 displays the moderator effect of meaningfulness of SSA on perceived stress in predicting self-transcendence. The results indicate that there was a main effect of perceived stress (β = -0.58, *p* = 0.00) and a main effect of meaningfulness of SSA (β = 0.19, *p* = 0.00),

accounting for 40.5% of variance in predicting self-transcendence, F (2, 193) = 65.56, $p = 0.00$. Yet, there was no significant interaction effect of meaningfulness of SSA ($\beta = 0.72$, $p = 0.47$), accounting for 40.6% of variance in predicting self-transcendence. Figure 12 demonstrates the path diagram for the moderator hypothesis of meaningfulness of SSA on perceived stress in predicting self-transcendence.

TABLE 21. Moderator Effect of Meaningfulness of Socially Supportive Activity on Perceived Stress in Predicting Self-Transcendence (N = 196)

	B	SE B	β	*p*
Step 1				
Perceived stress	-0.65	0.06	-0.58*	0.00
Meaningfulness of socially supportive activity	2.55	0.74	0.19*	0.00
Step 2				
Perceived stress	-0.86	0.30	-0.77*	0.01
Meaningfulness of socially supportive activity	1.67	1.42	0.13	0.24
Perceived stress × Meaningfulness of socially supportive activity	0.07	0.10	0.19	0.47

Note. $R^2 = 0.405$ for Step 1; $R^2 = 0.406$ for Step 2; B = unstandardized coefficients. SE = standard error estimates. β = standardized coefficients. *p* = significant level at .05



Note. NS = No significant

FIGURE 12. Path Diagram for Moderator Hypothesis of Meaningfulness of SSA on Perceived Stress

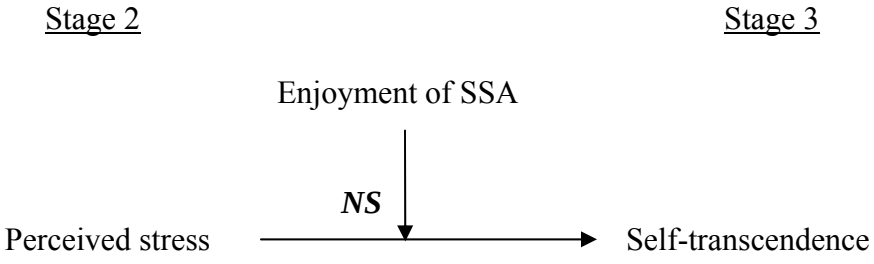
Table 22 displays the moderator effect of enjoyment of SSA on perceived stress in predicting self-transcendence. The results indicate that there was a main effect of perceived stress (β = -0.57, *p* = 0.00), accounting for 41.1% of variance in predicting self-transcendence, F (2, 193) = 67.36, *p* = 0.00. However, there was no significant interaction effect of enjoyment of SSA (β = 0.36, *p* = 0.21), accounting for 41.6% of variance in predicting self-transcendence. Figure 13 demonstrates the path diagram for the moderator hypothesis of enjoyment of SSA on perceived stress in predicting self-transcendence.

In summary, there was a main effect of perceived stress in predicting self-transcendence. The meaningfulness and enjoyment components of SSA also have main effect of perceived stress in predicting self-transcendence. Nevertheless, only the frequency of SSA revealed a moderator effect on perceived stress in predicting self-transcendence. In other words, the frequency of participating in socially supportive activities facilities the relationship between perceived stress and self-transcendence among institutionalized Taiwanese elders.

TABLE 22. Moderator Effect of Enjoyment of Socially Supportive Activity on Perceived Stress in Predicting Self-Transcendence (N = 196)

	B	SE B	β	p
Step 1				
Perceived stress	-0.64	0.06	-0.57*	0.00
Enjoyment of socially supportive activity	2.91	0.77	0.21*	0.00
Step 2				
Perceived stress	-1.03	0.32	-0.92*	0.00
Enjoyment of socially supportive activity	1.32	1.48	0.10	0.37
Perceived stress * Enjoyment of socially supportive activity	0.12	0.10	0.36	0.21

Note. $R^2 = 0.411$ for Step 1; $R^2 = 0.416$ for Step 2; B = unstandardized coefficients. SE = standard error estimates. β = standardized coefficients. . *p* = significant level at .05



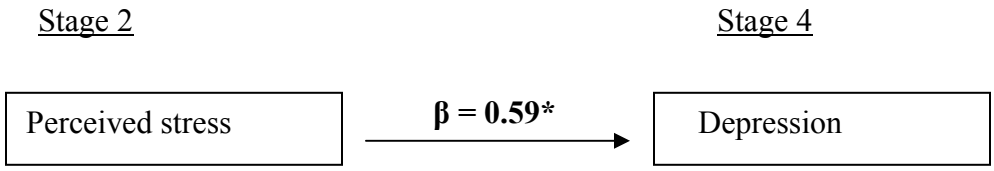
Note. NS = Non statistically significant

FIGURE 13. Path Diagram for Moderator Hypothesis of Enjoyment of SSA on Perceived Stress

Step 1c: Regression Testing on Stage Four Variable Depression

Research Hypothesis 7: Perceived stress has a direct positive relationship with depression

One regression analysis was performed with stage 4 variable depression regressed on stage 3 variable an elder's perception of stress. An elder's perception of stress presented a significantly positive, direct effect on depression ($\beta = 0.59$, $p = 0.00$), accounting for 34.3% of variance in predicting depression (Figure 14). This hypothesis was supported.

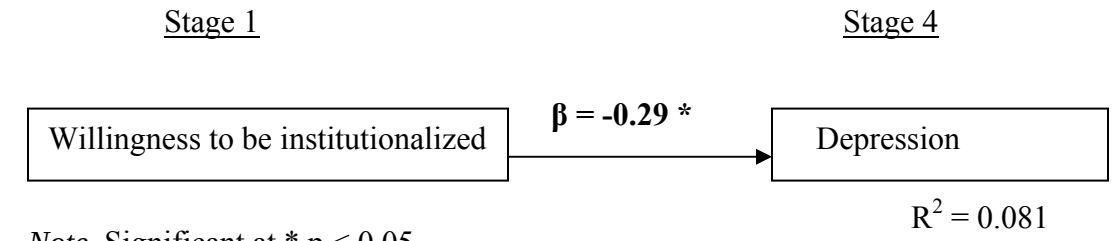


Note. Significant at * $p < 0.05$

FIGURE 14. Path Diagram Hypothesis Testing Perceived Stress on Depression

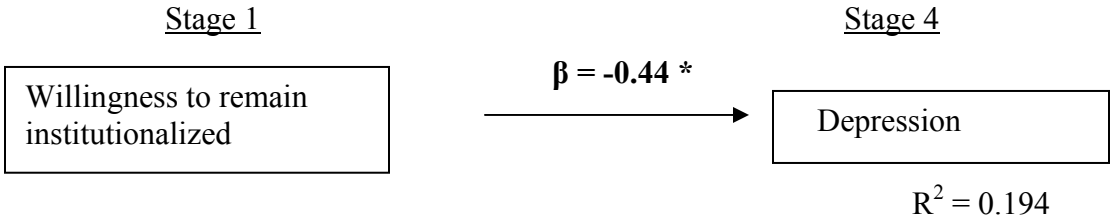
Research Hypothesis 8: The degree of acceptance of institutionalization has a direct negative relationship to depression

Two regression analyses were identified. Stage four variable depression regressed on an elder's willingness to be institutionalized as well as regressing on an elder's willingness to remain institutionalized. The results display that both an elder's willingness to be institutionalized and an elder's willingness to remain institutionalized had a significantly negative, direct effect on depression ($\beta = -0.29$, $p = 0.00$; $\beta = -0.44$, $p = 0.00$, respectively). The willingness to be institutionalized explained 8.1% of variance in predicting depression and 19.4% for the willingness to remain institutionalized. Figure 15 and 16 demonstrate path diagrams for hypothesis testing acceptance of institutionalization. This hypothesis was supported.



Note. Significant at * $p < 0.05$

FIGURE 15. Path Diagram for Hypothesis Testing Willingness to Be Institutionalized on Depression

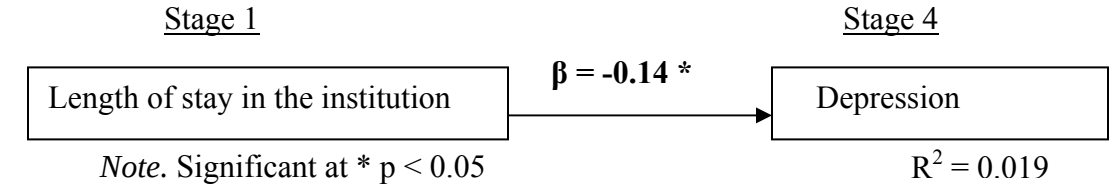


Note. Significant at * $p < 0.05$

FIGURE 16. Path Diagram for Hypothesis Testing Willingness to Remain Institutionalized on Depression

Research Hypothesis 9: The length of stay in the institution has a direct negative relationship to depression

One regression analysis was identified with stage four variable depression regressed on stage one variable the length of stay in the institution. Figure 17 presents that the length of stay in the institution had a negative direct effect on depression ($\beta = -0.14$, $p = 0.05$), accounting for 1.9% of variance in predicting depression. This hypothesis was supported.

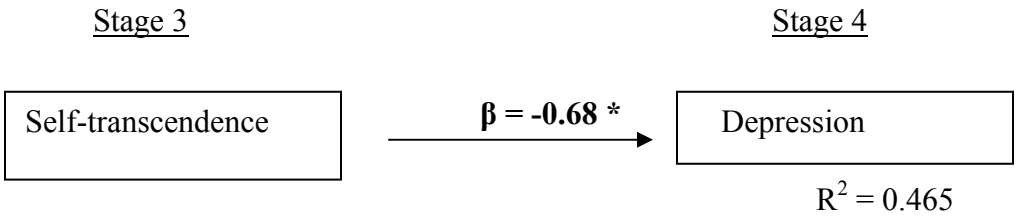


Note. Significant at * $p < 0.05$

FIGURE 17. Path Diagram for Hypothesis Testing Length of Stay in the Institution on Depression

Research Hypothesis 10: Self-transcendence has a direct negative relationship to depression

The regression analysis for hypothesis 10 was that stage four variable depression regressed on stage 3 variable self-transcendence. The result supports this hypothesis in which self-transcendence had a significant negative direct effect on depression (β = -0.68, p = 0.00), accounting for 46.5% of variance in predicting depression (Figure 18).



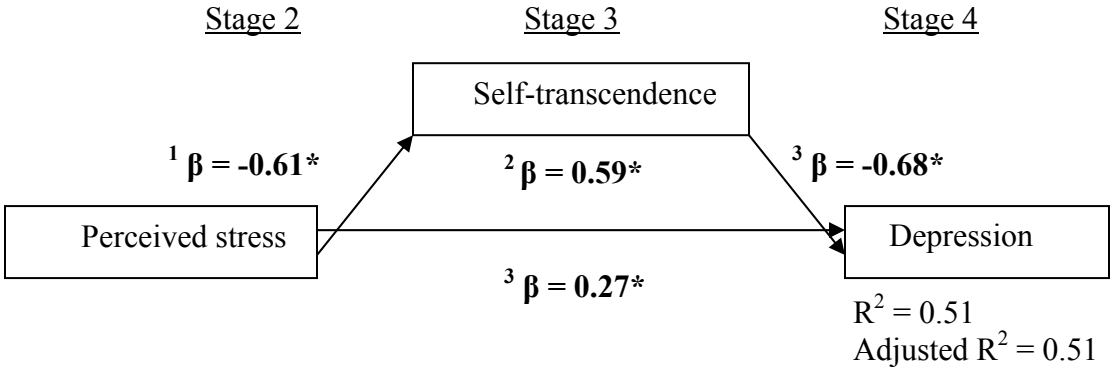
Note. Significant at * p < 0.05

FIGURE 18. Path Diagram for Hypothesis Testing Self-Transcendence on Depression

Research Hypothesis 11: Self-transcendence mediates between perceived stress and depression.

To test for the statistical significance of a mediator effect of self-transcendence, three regression analyses were performed. The first equation regressed self-transcendence on an elder's perception of stress. The result was supported as reported on the fifth hypothesis (β = -0.61, p = 0.00). An elder's perception of stress explained 37% of the variance in self-transcendence. The second equation regressed depression on an elder's perception of stress. The result was also supported as reported on the seventh hypothesis (β = 0.59, p = 0.00). Perceived stress explained 34% of the variance in depression. The third equation regressed depression on both self-transcendence and an elder's perception of stress. Both self-transcendence and an elder's perception of stress simultaneously entered in predicting depression using the forced enter multiple regression. Two conditions must be met in the third equation to present a mediator effect (Baron & Kenny, 1986; Bennett, 2000). First, self-transcendence was a significant

predictor of depression which was supported on the hypothesis 10 (β = -0.68, p = 0.00). Self-transcendence explained 47% of the variance in depression. Second, comparing to the second equation, the reduced direct association between an elder's perception of stress and depression significantly must present in the model (β = 0.27, p = 0.00). The results indicate beta regression dropped from 0.59 in the second equation to 0.27 in the third equation (Figure 19). Thus, a mediating effect of self-transcendence was supported. Furthermore, both an elder's perception of stress and self-transcendence explained 51% of variance in depression.



Note. Significant at * p < 0.05; **p< 0.01; *** p< 0.0001

FIGURE 19. The Mediator Effect of Self-Transcendence on the Relationship Between Perceived Stress and Depression

Table 23 summarizes each path diagram testing direct effect of independent variable on dependent variable with an unstandardized coefficient, a standardized coefficient, a *p* value, and a R square.

TABLE 23. Regression Analysis Testing Direct Effect of Independent Variable on Dependent Variable

Path diagram	Independent	Dependent	*B*	β	t	*p*	R^2
WI → PS	Willingness to be institutionalized	Perceived stress	-0.73	-0.19	-2.71	0.01	0.037
WRI → PS	Willingness to remain institutionalized	Perceived stress	-1.23	-0.34	-4.98	0.00	0.113
LOS → PS	Length of stay	Perceived stress	-0.78	-0.16	-2.18	0.03	0.024
PS → ST	Perceived stress	Self-transcendence	-0.68	-0.61	-10.62	0.00	0.368
WI → DP	Willingness to be institutionalized	Depression	-0.55	-0.29	-4.15	0.00	0.081
WRI → DP	Willingness to remain institutionalized	Depression	-0.81	-0.44	-6.83	0.00	0.194
LOS → DP	Length of stay	Depression	-0.35	-0.14	-1.94	0.05	0.019
PS → DP	Perceived stress	Depression	0.29	0.59	10.06	0.00	0.343
ST → DP	Self-Transcendence	Depression	-0.30	-0.68	-13.00	0.00	0.465

Note. WI = Willingness to be institutionalized. WRI = Willingness to remain institutionalized.
LOS = Length of Stay in the Institution. PS = Perceived Stress. ST = Self-Transcendence. DP = Depression.
B = unstandardized coefficient. β = standardized coefficient.

Step 2: Calculating Direct, Indirect, and Total Effect of Independent Variables

After examining and confirming the direct effect of each independent variable on depression, the indirect effect for each independent variable was calculated by multiplying the coefficients of each path between independent variable and dependent variable. Thus, the indirect effect for willingness to be institutionalized on depression was calculated by multiplying the coefficients of each path between willingness to be institutionalized and depression: the path of willingness to be institutionalized to perceived stress ($P_{w,p}$), the path of perceived stress to self-transcendence ($P_{p,s}$), and self-transcendence to depression ($P_{s,d}$). The result yields the coefficient, 0.08. The total effect of willingness to be institutionalized on depression was calculated by summing the coefficients of direct and indirect effects. The result yields the coefficient, -0.37.

The indirect effect for willingness to remain institutionalized on depression was calculated by multiplying the coefficient of each path between willingness to remain institutionalized and depression: the path of willingness to remain institutionalized to perceived stress ($P_{r,p)}$, ($P_{p,s)}$, and ($P_{s,d)}$. The result yields the coefficient, -0.14. The total effect of willingness to remain institutionalized on depression was -0.58.

The indirect effect for length of stay in the institution on depression was calculated by multiplying the coefficient of each path between length of stay in the institution and depression: the path of length of stay in the institution to perceived stress ($P_{l,s}$), ($P_{p,s)}$, and ($P_{s,d)}$. The result yields the coefficient, 0.07. The total effect of length of stay in the institution on depression was -0.21.

The indirect effect for perceived stress was calculated by multiplying the coefficient of each path between perceived stress and depression: $P_{p,s}$ and $P_{s,d}$, yielding the coefficient, 0.41. The total effect of perceived stress on depression was 1.00. Additionally the indirect effect for perceived stress with a moderating effect of frequency of socially supportive activities on depression was calculated by multiplying coefficient of each path: ($P_{p,s)}$, the path of interaction effect of frequency of socially supportive activities to perceived stress in predicting self-transcendence ($P_{p,f,s}$), and ($P_{s,d)}$, yielding the coefficient, 0.30. The total effect of perceived stress with the interaction of frequency of socially supportive activity was 0.89. The results show that the total effect of perceived stress without a moderating effect of frequency of socially supportive activities had a higher coefficient than with a moderator.

In other words, participants who were more frequent participants in socially supportive activities likely reduced the negative impact of perceived stress on depression. There was no indirect effect of self-transcendence on depression. Thus, the total effect for self-transcendence was -0.68. Table 24 shows a summary of the direct, indirect, and total effect of each independent variable on depression. According to the total effect for each independent variable showed in Table 20, perceived stress reveals the greatest effect on depression, with the total effect of 1.00. Based on the hypothesized model, the direct, indirect, and total effects of independent variables on depression have examined and predominately were supported.

TABLE 24. Direct, Indirect and Total Effects of Independent Variables on Depression

Independent variable	Direct	+	Indirect	Total effect
Willingness to be institutionalized	$P_{w,d}$		$(P_{w,p})(P_{p,s})(P_{s,d})$	
	-0.29	+	(-0.19) (-0.61) (-0.68)	= -0.37
Willingness to remain institutionalized	$P_{r,d}$		$(P_{r,p})(P_{p,s})(P_{s,d})$	
	-0.44	+	(-0.34) (-0.61) (-0.68)	= -0.58
Length of stay in the institution	$P_{l,d}$		$(P_{l,p})(P_{p,s})(P_{s,d})$	
	-0.14	+	(-0.16) (-0.61) (-0.68)	= -0.21
Perceived Stress	$P_{p,d}$		$(P_{p,s})(P_{s,d})$	
	0.59	+	(-0.61) (-0.68)	= 1.00
Perceived stress with frequency of socially supportive activity	$P_{p,d}$		$(P_{p,s})(P_{p,f,s})(P_{s,d})$	
	0.59	+	(-0.61) (0.73) (-0.68)	= 0.89
Self-Transcendence	$P_{s,d}$		none	
	-0.68		none	= -0.68

Modified Model Testing

The originally hypothesized model was modified according to the results of testing each path corresponding with a research hypothesis on the first step of path analysis and the second step of direct, indirect, and total effects calculations. All alternative hypotheses were accepted, except the hypothesized moderator effect of filial responsibility expectation. Thus, the variable of filial responsibility expectation was removed in the alternative model. Among the three components of socially supportive activities, the frequency component was retained as a result of significant interaction effect on perceived stress in predicting self-transcendence. The remaining independent variables included the acceptance of institutionalization, the length of stay in the institution, the perceived stress, the self-transcendence, and the frequency of participating in socially supportive activities. Each proposed independent variable presented a direct effect on depression. Depression was predicted by self-transcendence, perceived stress, and institutionalization histories (Figure 20).

An elder's willingness to be institutionalized, an elder's willingness to remain institutionalized, and length of stay in the institution had a negative direct effect on depression in predicting depression(ß = -0.29, -0.44, -0.14, respectively). Also these three proposed variables presented a negative direct effect on perceived stress (ß = -0.19, -0.34, -0.16, respectively). Perceived stress had a positive direct effect on depression (ß = 0.59) and a negative direct effect on self-transcendence (ß = -0.61). Self-transcendence revealed a negative direct effect on depression (ß = -0.68).

Among the three components of socially supportive activities, frequency component of participation in socially supportive activities had a moderating effect on self-transcendence as an institutionalized elder experienced stress. The meaningfulness and enjoyment components revealed main effect on self-transcendence. In additional, acceptance of institutionalization and length of stay in the institution, and perceived stress had indirect effect on depression. Therefore, an additional research question was added and tested in the modified model.

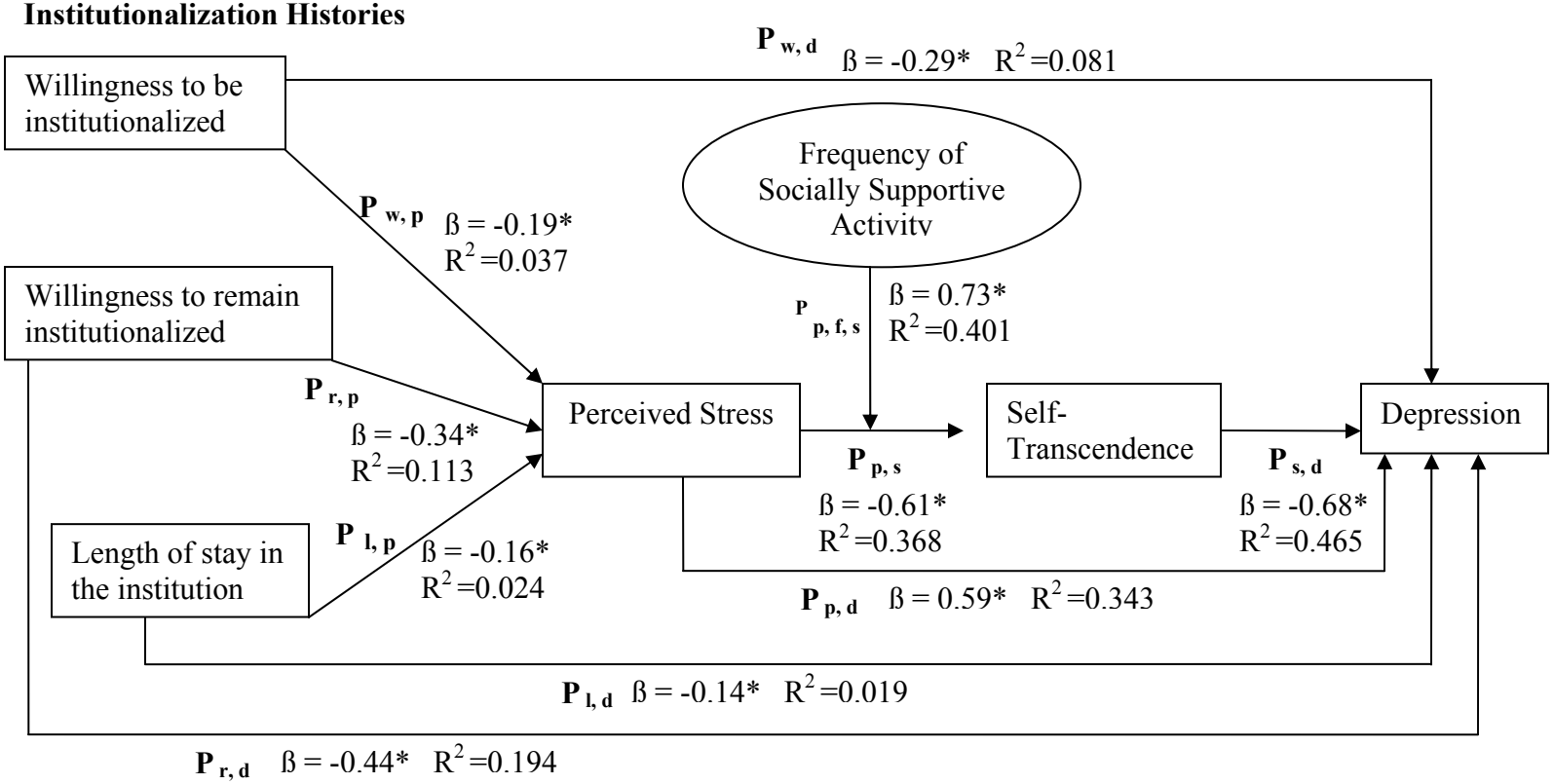


FIGURE 20. Modified Cultural-Psychosocial Model for Depression
* significant level at > .05

Research Question: What is the Best Predictor of Depression?

A stepwise multiple regression was used to test the best predictors of depression after modifying the originally proposed model. The independent variables that had a significant correlation with depression were included in the order of coefficient weights, which were self-transcendence, perceived stress, frequency of socially supportive activities, willingness to remain institutionalized, willingness to be institutionalized, and length of stay in the institution. The results reveal that self-transcendence was entered in the first step and accounted for 46.9% of the variance (p=0.00). Perceived stress was entered in the second step and accounted for an additional 4.8% of variance in depression ($R^2 = 0.517$, $p = 0.00$). Willingness to remain institutionalized was entered in the third step and accounted for an additional 3% of variance ($p = 0.01$).

In the final model, self-transcendence, perceived stress, and willingness to remain institutionalized were significant predictors of depression and totally accounted for significant 54.7% of variance (Table 25). Having lower self-transcendence, higher perceived stress, and less willingness to remain institutionalized were associated with greater depression. The willingness to be institutionalized, the length of stay in the institution, and the frequency of participating in socially supportive activities were not significant associated to depression.

TABLE 25. Stepwise Multiple Regression Analysis of Depression (N = 194)

	B	SE B	β	p
Step 1				
Self-transcendence	-0.31	0.02	-0.69	0.00
Step 2				
Self-transcendence	-0.23	0.03	-0.52	0.00
Perceived stress	0.14	0.03	0.28	0.00
Step 3				
Self-transcendence	-0.21	0.03	-0.47	0.00
Perceived stress	0.12	0.03	0.24	0.00
Willingness to remain institutionalized	-0.34	0.10	-0.19	0.01

Note. $R^2 = 0.469$ for Step 1; $R^2 = 0.517$ for Step 2; $R^2 = 0.547$ for Step 3.
B = unstandardized coefficients. SE= standard error estimates. B = standardized coefficients.

Summary

In this chapter, the psychometric properties of the Chinese Self-Transcendence Scale and the Chinese Socially Supportive Activity Inventory (SSAI), were tested and found to be valid in two pilot studies. The results of the main study of a cultural-psychosocial model for depression in elder care institutions were also demonstrated. Based on the results of testing each path, a modified model was developed to include an additional research question to determine the best predictor of depression. The following chapter will briefly discuss the results of the SSAI, but mainly focus on the results of main study.

CHAPTER FIVE: DISCUSSION

Discussion

This exploratory study is the first to describe the relationships between psychosocial factors and depression from a cultural perspective as well as describing predictors of depression among institutionalized Taiwanese elders. This chapter discusses the instrument, the Socially Supportive Activity Inventory, that was newly developed for this study and which was found to be highly reliable. Following a detailed discussion of sample characteristics, the research hypothesis for the cultural-psychosocial model for depression will be discussed. This study, again, is the first to relate acceptance of being institutionalized and an elder's expectation of filial responsibility to mental health.

Findings include how the roles of self-transcendence and socially supportive activities affect the incidence of depression. Although the moderating effect of expectation of filial responsibility on perceived stress was not supported in this study, the mediating effect of self-transcendence on depression was confirmed in this study. The Chinese cultural perspective, for example, destiny has an effect on attitudes of institutionalization. Finally, strengths and limitations of the study are described as well as the implications for nursing research, practice, and education.

Discussion of Socially Supportive Activities Inventory

The Socially Supportive Activity Inventory (SSAI) was developed especially for this study. Due to the social activities in different types of elder care institutions, the SSAI was designed to be an index-type scale that can be generally applied to various elder care facilities. In contrast to the previously developed instruments (Ejaz, et al., 1997; Lemke, et al., 1989;

Zimmerman, et al., 1982), the strengths of the SSAI include: 1) SSAI is a measurable scale rather than an observational one that measures the quality and quantity of socially supportive activities in facility settings; 2) the psychometric properties of the SSAI are well established, indicating its stability and cultural sensitivity; and 3) SSAI conceptually reflects the elder-care institutional activities which involve a broader network of elderly residents, from family-centered to non-family contacts. However, the SSAI was developed for and applied to Taiwanese institutional elders. In future studies, modifications on some categories of socially supportive activities may be necessary to account for different cultural backgrounds. Also, retesting the psychometric properties of the modified scale is highly recommended.

Discussion of Sample Characteristics

In this study, men and women were about equally represented (49% were men and 51% were women) with the mean age of the sample as 79.25 years old (SD =7.40). The majority of this sample was widowed and Buddhist. These data are quite similar to other studies in nursing homes in Taiwan (Chou, 2005; Tsai, 2006; 2007, Tu, Wang, Yeh, 2006, Yeh, et al., 2003). Similar to other studies in long-term care facilities in Taiwan as well, about one- fifth of the sample reported no religious preference (Tseng & Wang, 2001; Chao et al., 2005). The majority (63.8%) of the sample reported that they were just able make ends meet which is similar to the findings of previous studies in Taiwan (Tsai, et al., 2005). Compared to the 2005 Ministry of the Interior national survey in Taiwan, this finding is lower than for general Taiwanese elders who reside in the community.

This sample had a higher literacy level than the general population of Taiwanese elders, while the percentage for the elementary education level (43.4%) is nearly the same (Minister of

Interior, 2005). The lower percentage of illiteracy found in the present sample was surprising when compared to the findings from other studies of long-term care facilities (32.1%, Li & Yin, 2005; 30.67%, Tsai, et al., 2005; 34.78%, Tseng, et al., 2001; 45%, Yeh, et al., 2003). The discrepancy might be due to the different ways that the researchers defined literacy. Elders who were literate, but received no formal education, may have been grouped with the illiterate group instead of grouped with those with formal education (considered literate). In other words, if the literate group with no formal education (7.1%) in this study was grouped with the illiterate group (25%), 32.1% of the sample would be considered illiterate. Therefore, this study data would then be more closely aligned to the percentage of illiteracy shown in other long-term care facility studies.

The average of three children per institutionalized elders shown in this study does not differ significantly with other studies (Chao, et al., 2005; Sarina, 2003; Tsai, et al., 2005, Tsai, 2006). With respect to children visits, 76% of the elders in this study expected their children to visit them "as many times as they can" during their institutionalization. This is in contrast to Tseng and Wang's study of quality of nursing home life (2001), in which the most common response with regards to frequency of children's visitation was "once a week."

The findings in this study might be due to increasing empathy by institutionalized elders towards their children. Institutionalized Taiwanese elders in this study described their recognition of the difficulties their children experienced as a result of the negative impacts of the global economic crisis and the increasing rate of unemployment. Those elders who were not specific about the frequency of visits by their children (i.e., "as many times as they can") expressed their compassion about the current financial strain on their children. Elders explained

that their children also needed to delegate their time and energy to meet their own family responsibilities and their jobs. A great proportion of the institutionalized Taiwanese elders stated their expectations for their children of "keeping a job and surviving" was more important than "visiting an aged person". As a result, institutionalized Taiwanese elders found it more acceptable to be visited as much as their children were able to, rather than burdening their children by requiring scheduled or routine visits.

The elder care institutions in this study included senior homes/centers, intermediate care nursing homes, and mixed skilled and intermediated care nursing homes. The length of stay in an institution in this study was longer than lengths of stay found in previous studies in Taiwan (Chao, et al., 2005; Lin, et al., 2005; Tseng, et al., 2001; Tu, et al., 2006; Yen, et al., 2002). This difference in findings is probably due to a greater proportion of study participants being recruited from senior homes/centers in this study. The length of stay in an institution might also be related to the level of care elders require in each type of elder care facility. A great portion of participants tended to fall in one of two extreme groups: under one year (31.4%) or over 4 years (29.4%). The relatively shorter term group, 1-12 months, tended to come from the intermediate care nursing homes where they have greater care demands; higher functioning impairment; and a higher rate of death, hospitalization, transfers out, or discharges home than those living in senior homes/centers. The other large group, longer or equal to 4 years, tended to come from senior homes/centers where the residents usually have fewer physical disabilities, higher functioning, and longer longevity than those living in the other two types of elder care facilities. Therefore, the various length of stay in the institution is associated with the type of elder care institutions that participated in the study.

Regarding the degree of accepting institutionalization, there are important findings in this study that have not been found in previous studies in Taiwan. Previous studies explored the determining factors that contributed to nursing home placement from both an elder's demographic or physical characteristics and from the viewpoint of family caregivers (Chiu, Shyu, Liu, Wang, & Chang, 2001; Kao, 2003; Liu & Tinker, 2001; Shyu, et al., 2002). Few studies investigated the degree of acceptance of institutionalization that the elderly residents have and how it relates to mental health.

This sample indicated an average willingness to be institutionalized at 4.48 (SD = 1.79) and 5.58 (SD = 1.87) after a period of institutionalization on a 7-point scale. Higher scores represented a higher degree of acceptance of institutionalization. A neutral point, 4, indicated residents deferred to the decisions made by their children. Approximately 47% of the participants reported "4," indicating neither a willingness nor unwillingness to be institutionalized. This is congruent with early studies about the decision making and control over the decision to move among nursing home residents (Kasl, 1972; Reinardy, 1992; Reinardy & Kane, 1999). About 48-59% of nursing home residents did not experience nor had little control of the decision-making to be institutionalized. Family members were essentially the major influence on whether or not an elder was institutionalized (Reinardy 1992; Reinardy, et al., 1999).

After a period of institutionalization, only 18% of the participants in this study reported a neutral attitude toward institutionalization, down from 47%. Also, the percentages of both moderate and strong acceptance increased after being institutionalized. Interestingly, the percentages of unwillingness, both strong and moderate, remained the same before and after admission. For approximately 55% of the participants, their degree of acceptance was not

changed after a period of institutionalization. The findings indicate that the elderly residents do try to accept institutionalization through recognizing benefits such as companionship, good care, and not being a burden to their children. But the residents still expressed a deep desire to return home. Being home, no matter under what conditions is extremely important in Chinese culture.

In this study, of the 196 participants, six participants (3.1%) were diagnosed with depression. Nevertheless, 95 (48.5%) were identified as having clinically mild depression by the 15-item Geriatric Depression Scale (GDS). These results indicate that depression is indeed under-diagnosed in elder care institutions in Taiwan. Findings are similar to previous studies of depression in Taiwan (Lin, et al., 2005). The overall prevalence of depression in this study was 48.5% which is consistent with previous findings of prevalence rates from 43.3 to 65% (Lin, et al., 2005; Tsai, et al., 2005; Tsai, et al., 2005; Tsai, 2006, 2007). Differences in prevalence rates are probably the result of recruiting elders from different types of elder care institutions in the various studies. For example, intermediate care facilities have shown a higher prevalence of depression than skilled nursing facilities (Lin, et al., 2005). In this study, three different types of elder care institutions were recruited and yielded a general prevalent rate. As a result, the prevalence of depression in this sample of institutionalized elders was in a range found among long-term care institutionalized elders in Taiwan.

In summary, most participants were middle-old aged, Fujianese, widowed with an average of three children, “just make ends meet” financially, and had no more than an elementary school education. These demographic characteristics are consistent with other studies of institutionalized elders in Taiwan. A great majority of participants expected their children to visit them as much as they are able to and to deferred to the decisions made by their children to

be institutionalized. The acceptance of being institutionalized did not change significantly after a period of institutionalization compared to prior to admission. Finally, the Geriatric Depression Scale indicates a high prevalence of depression among institutionalized Taiwanese elders than formally identified by physician.

Discussion of Results Testing Research Hypotheses

Research Hypothesis 1: *The lower the degree of acceptance of institutionalization reported by an elder, the higher the level of perceived stress*

This study is the first in quantifying the relationship between the degrees of acceptance of institutionalization to perceived stress from an institutionalized elder's perspective. Consistent with expectations, this hypothesis was supported in this population. The degree of acceptance of institutionalization significantly predicts the extent of perceive stress. An elder's willingness to remain institutionalization is a stronger predictor of perceived stress than an elder's willingness to be institutionalized. This finding indicates that the participant's current willingness to remain institutionalized is more important and has a greater affect on incidence of depression than the original attitude towards institutionalized. In this study, the participants encountered mild stress as a result of institutionalization. The results are congruent with most early studies that institutional long-term care placement is a source of stress (Capezuti, Boltz, Renz, Hoffman, & Norman, 2006; Kaisik & Ceslowitz, 1996). Moreover, this prominent finding indicates that participants who had a lower degree of acceptance, both pre- and post-institutionalization, were more likely to experience a higher degree of perceived stress. In this study, participants were asked to recall their acceptance of institutionalization prior to admission. The findings clearly illustrate that a low level of acceptance of institutionalization and unwillingness to be and to

remain institutionalized are the source of stress to the institutionalized elders. Proactive and ameliorative interventions such as family counseling and support groups are important to reduce institutional-related stress and to prevent adverse effects associated with continued stress.

Research Hypothesis 2: The shorter the length of stay in the institution, the higher the level of perceived stress by an elder

This hypothesis was supported. The length of stay in the institution significantly predicts the extent of perceived stress. Elderly residents who resided in the institution longer were more likely to experience less stress than for shorter stays. Some possible explanations include the elder's adaptation by employing a positive attitude toward institutional life and the elder's awareness of the inevitable that institutionalization may be a win-win circumstance for their own children and oneself. Possibly, simply passage of time may lessen the effect of stress. There may also be a cultural explanation. Taiwanese elders usually believe that when the uncontrollable and unavoidable events are a result of destiny and as such, they must comply with any subsequent impacts. As a consequence, stress may diminish as time goes on. Practically, this finding suggests the need for early interventions that facilitate adjusting to institutional life to decrease the elder's vulnerability to the stress of institutionalization.

Research Hypothesis 3: An elder's expectation of filial responsibility is a moderator that influences the strength of the degree of acceptance of institutionalization-perception of stress relationship

Little is known about the role of an elder's expectation of filial responsibility on perceived stress, particularly institutionalized elders. This is the first study to investigate the relationship of the Taiwanese elder's own expectation of filial responsibility to perceived stress.

However, the hypothesized moderating effect of filial responsibility expectation on perceived stress was not supported by this study. The results indicate that an elder's willingness to be institutionalized (β= -0.21, p = 0.00) and an elder's willingness to remain institutionalized (β = -0.35, p = 0.00) were the main effects on perceived stress. The expectation of filial responsibility had no moderating effect on perceived stress. As a Chinese cultural factor, filial responsibility is an elder's belief in the children's duties and responsibilities toward him/her. Surprisingly, in this study, the expectation of filial responsibility did not function as a buffer to change the negative correlation between accepting institutionalization and perceived stress. This author originally assumed that institutionalized elders would adjust their traditional expectations of filial responsibility such as day-to-day care by accepting alternative caring approaches such as periodically paying the institution residential fee and frequent visitation and phone calls to reduce stress. However, in this study, the results illustrate that regardless the degree to which elders were willing to be institutionalized and to remain institutionalized, the institutionalized elders did not modify their expectations toward their children. The degree of acceptance of institutionalization is related to their perception of stress.

Two plausible explanations are provided. First, this preliminary evidence shows that an elder's filial attitude toward children is strongly retained as a core traditional family value that does not be change over time regardless of societal changes on family structure and living arrangements. This study sample reported a high expectation of filial responsibility toward their children, with an average score of 7.37 (SD = 3.33) on a 10-score scale. The higher score reported a higher expectation of filial responsibility. A score of 9 most commonly appeared, indicating elders highly expected their children to fulfill their duties and responsibilities to aged

parents. This finding is consistent with one study of filial obligations and expectations in China in which old people continued to have high filial expectation for young people (Yue & Ng, 1999).

Second, only a question item was used to measure an elder's general expectation of filial responsibility, which might not offer sufficient range of scores. In contrast, a 31-item Expectation of Filial Responsibility Scale (EFRS) used in Taiwanese population developed by Dai (1995) validated four dimensions of expectation of filial responsibility, including tender-heartedness to parents, obedience to parents, supporting parents or worshipping deceased parents and ancestors, and protecting and glorifying parents. Rather than one general question to evaluate the degree of expectation of filial responsibility, future studies should use multidimensional measures of the concept of filial expectation to produce a range of scores.

Research Hypothesis 4: An elder's expectation of filial responsibility is a moderator that influences the strength of the length of stay in the institution-perception of stress relationship

This study is the first to investigate the role of Taiwanese elder's expectation of filial responsibility to perceived stress. However, the hypothesis of the duration of institutionalization and the expectation of filial responsibility interaction in predicting perceived stress was rejected in this study. The associated relationship of length of stay in the institution to perception of stress was not affected by an elder's expectation of filial responsibility. Institutionalized elders who resided in the facility longer and had lower expectation of filial responsibility would not experience lower perceived stress. This finding has a relatively straightforward explanation: filial piety is firmly rooted in the culture of Taiwanese elders. In this study, the great majority of Taiwanese elders interviewed strongly agree that caring for aged parents is legally recognized

and accepted by Chinese society. Filial piety is considered as a life-long responsibility (Dai, et al., 1998).

Research Hypothesis 5: The higher the level of perceived stress reported by an elder, the lower the level of self-transcendence

An elder's perception of stress significantly predicts self-transcendence. Elderly residents who experienced higher stress were associated with a lower level of self-transcendence. The relationship of stress to self-transcendence has been examined in a variety of populations (Bouckenooghe, Buelens, Fontaine, Vanderheyden, 2005; Limpanichkul, 2004; Runquist, 2006, Wasner, Longaker, Fegg, Borasio, 2005). However, no study has investigated aged population. Self-transcendence as spiritual resource for intensive care patients on mechanical ventilation brings relief and allows them to feel gratitude for being alive (Schumann, 1999). Mature adults gain mastery over stress through self-transcendence to achieve "transformative aging" (Walker, 2002). Thai caregivers of end stage renal disease (ESRD) patients mitigate their stressful life experiences and improve their quality of life through self-transcendence (Limpanichkul, 2004).

In spite of this research, no studies have investigated how a person's perception of stress predicts the degree of self-transcendence, particularly in institutionalized elders. This study is the first to find that institutionalized elders, who experienced greater stress, were more likely to have lower self-transcendence. Perceived stress is a predictor of self-transcendence. Possible explanations might be because environmental stressors are not identified and not solved by institutionalized elders as well as staff. As a result, accumulated unrelieved stressors may lead to elders losing their resilience dealing with adverse responses. Prior to admission at a facility, elders may anticipate losses such as original social network connections, freedom, independence,

and physical functioning. However, to experience endless losses during their institutionalization without applying ay effective coping mechanism continues to increase their level of stress, resulting in devaluing their self-worthiness and resources.

In Reed's theory of self-transcendence, life events that increase one's awareness of mortality in relation to vulnerability can generate a person's self-transcendence to heal through a sense of well-being (Reed, 2003). However, very low and very high levels of vulnerability are not related to increase self-transcendence. Reed's proposition is congruent with the present findings in this study as there was a moderate negative correlation between perceived stress and self-transcendence ($r= -0.61$, $p < 0.01$). This finding indicates that at high level of perceived stress, self-transcendence is more likely to diminish. These findings are very significant. It is imperative that geriatric care providers identify institutional-, environmental-, personal-related stressors for each elderly resident and assist each resident to effectively cope with these stressors. Ultimately, coping strategies to reduce stress should emphasize enhancing self-worthiness and lead to transcending.

Research Hypothesis 6: The greater amount of participation in socially supportive activity moderates the strength of a negative relationship between perceived stress and self-transcendence

This hypothesis was supported. Again, this pioneer study investigated the moderating effect that participation in socially supportive activities as measured in terms of frequency, meaningfulness, and enjoyment, has the relationship between perceived stress and self-transcendence. The results support that participation in socially supportive activities (SSA), particularly the frequency component, significantly and positively moderated the relationship

between perceived stress and self-transcendence. In other words, institutionalized elders who perceived greater stress but who participated more frequently in socially supportive activities were more likely to have a higher degree of self-transcendence. The frequency of participation in socially supportive activities functions as a buffer to promote self-transcendence while generally greater stress has a tendency to lower self-transcendence.

Although the meaningfulness and enjoyment components of SSA did not appear as strong moderators in predicting self-transcendence, both components do affect self-transcendence. The significantly positive correlations between participating in meaningfully socially supportive activities and self-transcendence and between participating in enjoyable socially supportive activities and self-transcendence indicate that these components may relate to greater self-transcendence.

These findings are congruent with other studies. Bickerstaff, Grasser, & McCabe (2003) identified some self-transcendence behaviors of elderly nursing home residents: feeling valued by self and others, responding to the needs of others that facilitated transcending losses, and keeping the mind, body, and spirit active that gives meaning to life. These behaviors might be achieved through helping others, relating with self/others/higher being, and adapting to bodily changes. They also suggested that participating in meaningful activities increases elderly residents' ability to transcend their losses. Evidence also indicated group-based interventional studies had a positive effect of self-transcendence, such as support groups for women with breast cancer (Coward, 1998), group psychotherapy for the elders (Young & Reed, 1995), and structured group reminiscence for assisted living residents (Stinson, et al., 2006). The present study contributes additional empirical evidence that the psychosocial mechanism of socially

supportive activities mitigates the effect of perceived stress and increases the sense of self-transcendence.

With respect to the theory of social support adopted for this study, the results support that when institutionalized elders experience a stress caused by their institutionalization, they actively engage in meaningful and enjoyable SSA as a coping strategy. As a result, these activities may enhance their self-transcendence, thereby preventing adverse mental health problems. Participating in socially supportive activities is not merely an opportunities for socialization. It provides residents opportunities to participate in important instrumental and emotional social support and companionship, to help other residents with activities, to talk and share past experiences and current feelings about institution life, and to feel valued and respected by others. By engaging in meaningful and enjoyable socially supportive activities, institutionalized elders are able to create an institutional social network within the institution, renew self- identity, increase self-worth, adapt to physical limitations, and overcome transitional difficulties.

During data collection, many elderly residents described they felt respected when staff invited them to participate in activities and they felt valued by taking on some duties associated with these activities. Some residents expressed their worthiness in terms of being with, and caregiving for, other severed disabled residents during participating group activities, sharing past experiences with other residents or outside visitors, and passing on wisdom to the younger generation (e.g., students). Most residents enjoyed socially supportive activities because they did not have opportunities to join when they were young. They were open-minded in accepting activities designed by the facility not only for killing time, but also because it was a way to accept and optimize their current lives and gave residents a feeling of control over their lives.

Even though some residents would prefer other activities, they still participated in those offered by the facility because they appreciated the staff's effort and believed they need to contribute to the facility. Many residents expressed that they are grateful for they have right now and attempt to forget their difficulties by involving themselves in the activities and interacting with other residents. Other elderly residents stated they were interested in activities but they did not participate because of physical limitations, such as poor vision and physical deformity. However, it is logical to assume that more meaningful socially supportive activities designed specifically for elders' needs and enjoyment would encourage elderly residents to participate more often. These findings indicate the importance of frequent participation in socially supportive activities to alleviate institutional-related stress and enhance self-transcendence. A way to encourage frequent participation is to tailor activities to these elders by providing activities that are meaningful, enjoyable, and allow for active participation.

Research Hypothesis 7: Perceived stress has a direct positive relationship with depression

This study is the first to find a positive correlation between perceived stress and depression in Taiwanese institutionalized elders. This preliminary finding is congruent with current research. Elders who resided in long-term care facilities have new stressors related to residence and thus increased risk of depression (Choi, Ransom, Wyllie, 2008; Pot, Deeg, Twisk, Beekman, & Zarit, 2005). A qualitative study conducted by Choi, et al. (2008) clearly identified many nursing home environmental stressors that were related to resident's perception of depressive symptoms. These environmental stressors were loss of independence, freedom, and continuity with their past life, lack of privacy and frustration due to having a roommate and sharing a bathroom, resident ambivalence toward cognitively impaired residents, ever present

death and grief, and lack of meaningful in-house activities. These numerous, identified themes are similar to the researcher's findings in this study during data collection in Taiwan.

The following examples found in Taiwan's elder care institutions provides a better understanding of institutional stressors Taiwanese elderly residents experience. Many Taiwanese institutionalized elders described that suppressed their emotional reaction to their roommates or other residents' disturbed behaviors such as yelling, wandering, and quarreling; to unreasonable complaints to food services, staff; and to different lifestyles. Some residents expressed feeling stressed at seeing other being visited by their children, while they had no visits. Many residents stated a sense of losing freedom and autonomy as well as the additional stress from being unable to control and change strict institution routines and regulations. Mounting empirical and statistical evidence demonstrates that many aspects associated with being institutionalized is a stressor, resulting in a higher increasingly incidence of depression among elderly residents. In stark contrast, a higher level of self-directedness in late adulthood is related to psychological well-being (Yu, Chamorro-Premuzic, Honjo, 2008).

Research Hypothesis 8: The degree of acceptance of institutionalization has a direct negative relationship to depression

This hypothesis was supported. Both the willingness to be institutionalized and the willingness to remain institutionalized indicated acceptance of institutionalization, significantly predicted depression. Elderly residents who reported more willingness to be institutionalized and more willingness to remain institutionalized were less likely to be depressed. The willingness to remain institutionalized, again, is directly related the incidence of depression. These findings are congruent with earlier studies on elders who had control over the decision to relocate to a nursing

home (Reinardy, 1992; 1995). Reinardy showed that nursing home residents who reported "wanting to move" was associated with satisfaction with the facility's services and with greater participation in nursing home activities. Those who reported the move as desirable revealed a greater positive change on their health, specifically the activities of daily living. Ryff and Essex (1992) found that aging women who experienced discrepancy with their reasons for moving and reasons for selecting the new setting was related to a lower level of purposefulness, continued development, greater self-regard, and depression. Yet, expect in this study, none of these studies clearly states the impact that accepting institutionalized may have on depression.

This preliminary finding demonstrates the need and importance for geriatric care providers to emphasize appraising institutional relocation as willing or unwilling and routinely evaluating the willingness to remain institutionalized. From a community care viewpoint, a thorough transitional plan containing full information about the facilities, including institutional and procedures, policies, and orientations, and visits to the long-term care facilities is imperative. Access to this information prior to admission can lessen the negative impressions of elder care institutions and improve attitudes toward institutionalization.

From an institutional care viewpoint, this preliminary finding on Taiwanese elders should direct encourage institutional care providers to design useful interventions to facilitate adapting to changes in the new environment, thereby improving negative attitude towards elder care facilities which may further prevent depression. Such interventions may include support groups where senior residents can share their experiences. Ideally, such interventions should be conducted prior to admission and post-admission for a greater acceptance of institutional life.

Ultimately, a greater acceptance of institutionalization and the related reduction of incidence of depression will reduce long term care costs.

Research Hypothesis 9: The length of stay in the institution has a direct negative relationship to depression

The hypothesis that length of stay in the institution is predictive of depression was supported in this study. Participants who resided in the institution longer, were less likely to be depressed than those in short-term stays. This finding is consistent with other studies in Taiwan as well as in Western countries (Ip, Leung, Mak, 2000; Jones, et al., 2003; Lin, et al., 2007), although in this study length of stay was a weak predictor.

In contrast, Pot et al. (2005) reported older Dutch people showed more depressive symptoms after three years of institutionalization because of deteriorating health, feeling disappointment, and developing a sense of loss. This dissimilarity might be related to cultural differences. In Taiwan, regardless of religious preference, it is not unusual to hear Taiwanese elders comment, "Everything turns out regardless of your likes or dislikes but as a result of your fate and karma. You'd better adjust your attitudes and be more accepting of consequences in order for a better next life." This positive reinforcement and self-acceptance probably helps institutional elders to deal with life's difficulties and to overcome negative responses, such as feeling depressed towards institutionalization. These reactions become more prevalent and more apparent over time. This cultural attitude probably explains why Taiwanese elders residing in the institution longer exhibit less depression.

Research Hypothesis 10: Self-transcendence has a direct negative relationship to depression

Self-transcendence significantly predicted depression consistent with the findings from previous studies (Klaas, 1998; Reed 1991b). Self-transcendence has shown a significantly moderate to strong correlation to mental health indicators such as depression, sense of coherence, self-esteem, and hope, and to other variables such as quality of life, functional capabilities and emotional well-being. However, this is the first study to find that self-transcendence is a predictor of depression in Taiwanese elders. Higher self-transcendence is associated with a lower incidence of depression among elder-care institutional residents. The contribution of self-transcendence might be that it serves as a facilitator that motivates the institutionalized elders to deliberately adjust their attitude towards institutional life and to sublimate their feeling of loss and becomes more accepting of their circumstances. Once an institutionalized elder becomes aware of self-transcendence, the elder develops a positive attitude towards institutionalization which, in turn, leads to being more involved in the institutional environment. Such involvement and participation may lower the incidence of depression.

Research Hypothesis 11: Self-transcendence mediates between perceived stress and depression

The mediating effect of self-transcendence on depression was supported. This study is the first to explain the psychological mechanism of self-transcendence on depression among a cohort of institutionalized elders experiencing stress. When an institutionalized elder perceives strong stress, the possible increase in self-transcendence may lead to lowering the incidence of depression. In this study, the results revealed that an elder's perception of stress in relation to institutionalization may be an antecedent of self-transcendence. Consequently, increased self-transcendence is related to preventing incidence of depression. This finding is congruent with

Reed's proposition of self-transcendence. A person experiencing vulnerability is related to increased levels of self-transcendence, except in the extreme cases of very low and very high levels of vulnerability. This study cohort experienced, on average, mild stress (11.86/40 scores) and that might be why the results showed increased self-transcendence.

In addition, vulnerability is defined as an "awareness of personal mortality" (Reed, 2003, p. 149). Life events that increase one's sense of mortality, such as serious or chronic illness, disability, aging, and life crises, can evoke self-transcendence which enhances one's sense of well-being (Reed, 2003). In this study, being and remaining institutionalized is a stress to those institutionalized Taiwanese elders. However, institutionalized elders who are experiencing stress are not always aware of their mortality. In contrast, perceived stress may enable an elder to develop self-transcendence against depression. On the other hand, perceived stress may suppress the development of self-transcendence and may cause depression. In the end, the results of this study supported the mediating effect of self-transcendence on depression among stressed institutionalized elders.

Additional Research Question: What is the Best Predictor of Depression?

A stepwise multiple regression analysis has been processed to examine the best predictor of depression. The potential predictors, including self-transcendence, perceived stress, frequency of socially supportive activities, willingness to be institutionalized, willingness to remain institutionalized, and length of stay in the institution, were entered. The results showed that depression was significantly predicted by self-transcendence, perceived stress, and willingness to remain institutionalized (Table 20). These three predictors totally explained 54.7% of variance in predicting depression. Self-transcendence was the most powerful predictor of depression, which

explained 46.9% of total amount of variance. Perceived stress and willingness to remain institutionalized accounted for an additional 4.8% and 3% of variance, respectively. Interestingly, although frequent participation in socially supportive activities was supported as a moderator on the negative relationship between perceived stress and self-transcendence, it was not a significant predictor of depression in this study.

Numerous studies have found significant predictors of depression which included demographic indicators, such as lower education level (Chu, 2005; Ku, Liu, Tsai, 2006), poorer income (Tsai, et al., 2005), and shorter duration of residency (Ip, et al., 2000; Lin, et al., 2007) ; physical indicators, such as poor perceived health status (Ku, et al., 2006; Tsai, 2006; 2007), lower functional status (Chow, Kong, Wong, Draper, Lin, et al., 2004; Chu, 2005; Lin, et al., 2005), a greater number of chronic conditions (Hou, 2004; Lin, 2007), poorer cognition (Tsai, 2007), and more pain (Chu, 2005); and psychosocial factors, such as dissatisfaction with living situation (Huang, 2003; Ku, et al., 2006; Tsai, et al., 2005; Tsai, 2006), lower life satisfaction (Chow, et al., 2004), sense of loneliness (Hou, 2004), and lower social support (Lin, et al., 2007). No other previous studies, except this study, investigated that self-transcendence is the most significant predictor of depression on Taiwanese institutionalized elders. Additionally, when institutionalization is perceived as stressor or, lack of willingness to remain institutionalized additionally contributes to depression. In earlier studies, an institutionalized elder who was less willing to remain institutionalized tended to have greater perceived stress and increased incidence of depression. It is plausible to assume that continued perceived stress can gradually decrease a person's willingness to reside in the institution.

Therefore, it becomes very important for the facility's staff to implement effective interventions to motivate an elder's self-transcendence and increase his/her willingness to reside in the facility. Such interventions can include creating a home-like, warm, pleasurable environment, caring for the elderly residents with a respectful attitude, praising the resident's past contributions toward the society and present abilities to be successful in institutional life, and facilitating social connections through participating in diverse, meaningful, and enjoyable socially supportive activities. To facilitate the perception of self-transcendence, socially supportive activities, such as discussing personal wishes for funeral arrangement, storytelling, dining table arrangements, and having residents who are both willing and physically capable assist pushing other residents in wheelchairs, are suggested. In conclusion, these important results show it is critical for institutional care providers to enhance self-transcendence, reduce their institutional stress, and increase their willingness to remain institutionalized. These steps will improve the elder's mental health and quality of life, thereby minimizing further health costs.

Strengths and Limitations

The strengths of this study are many. First, culturally equivalent instruments were used to measure the proposed variables. All instruments used in this study were established as reliable and valid for Taiwanese elderly populations. In particular, the Chinese Self-Transcendence Scale and the Socially Supportive Activity Inventory (SSAI) was properly translated into Chinese and tested in a pilot study to confirm adequacy of reliability and validity of the instrument before conducting the main study. Additionally, the SSAI was developed for an institutional population with a Taiwanese cultural background. The SSAI only contained social- and supportive- related

activities that more precisely explain the psychosocial triggers of depression. Thus, using culturally-based, reliable instruments generates more confidence in the results than using measurements of questionable validity and poor reliability.

Second, cultural influences of depression were taken into account. This pioneer study used cultural factors and cultural values to clearly evaluate the psychosocial mechanisms of depression on institutionalized elders. Consequently, a facility's staff can manipulate identified psychosocial effects of depression to develop useful and effective interventions that will decrease the incidence of depression related to institutionalization.

Finally, three major types of elder care institutions representing a wide range of facilities were recruited: senior home/centers, intermediate care nursing homes, and mixed skilled and intermediate care nursing homes. The residential physical functioning levels ranged from highly independent to highly dependent. This diversity offered greater reliability in applying the findings to elder care facilities in general.

There are two limitations of the study. First, the use of convenience samples from elder care institutions in southern Taiwan limits the generalizability of the study. This sample was homogenous relating to race and culture, and as such can only be applied to similar populations. Second, although a cross-section design is appropriate for this descriptive exploratory study, the causality of the results can not be inferred. The effect of some significantly potential factors such as cognitive status, gender, and educational levels which mediate any relationship to depression were not measure in this study. A longitudinal design is highly recommended for future studies.

Implications for Theory

In this study, the results show that combination of social support and self-transcendence theories identify that participation in socially supportive activities is a coping mechanism that buffers stress, thereby facilitating self-transcendence and lowering depression. In addition, self-transcendence is a mediator between perceived stress and depression. Moreover, perceived stress is additionally identified as an antecedent of self-transcendence. Due to this study's cross-section design, the causality of perceived stress on self-transcendence is weak. The associated relationship of perceived stress to self-transcendence is supported in this study. Yet, the reverse relationship remains unsubstantiated. Therefore, it is strongly recommended that future longitudinal or quasi-experimental design studies be conducted to help better understand the association between perceived stress and self-transcendence.

Additionally, both theories contribute to determining the variables which are predictive of depression. However, these results are based on Taiwanese institutionalized elders. This combination of theories may also be applied to different age groups, settings, and cultures. Future studies may show the wider usefulness of both theories to substantially explain in-depth the psychosocial mechanism of depression.

Implications for Research

This study suggests four implications for further research. First, type of socially supportive activities categorized on the Socially Supportive Activity Inventory (SSAI) should be examined as to their effects of self-transcendence and depression. Due to a variety of socially supportive activities, from a resident's family network to institutional-based networks, included in the SSAI. The possible relationships between a particular type of socially supportive activity

and self-transcendence and between a particular type of socially supportive activity and depression are worthy studies which can help elder care practitioners to design the most beneficial activities to foster psychological health.

Second, unfortunately, adjusting an elder's expectation of filial responsibility to ameliorate the negative relationship between an elder's attitude towards institutionalization and perceived stress was not supported in this study. Future studies that use a reliable instrument to measure multidimensional concept of expectation of filial piety may generate a better understanding that the role of filial piety has on depression.

Third, this study collected retrospective data on the degree of acceptance elders felt towards being institutionalized. Longitudinal studies that follow elders' attitudes over the entire process of institutionalization would greatly contribute to understanding the effect that the willingness to accept and remain institutionalized has on depression. Additionally, the effect that an elder resident's role in the decision to be institutionalized has on mental health is a critical and valuable study, particularly in a family-oriented society. Thus, the results can assist elder care practitioners to clearly identify the right time and appropriate interventions to prevent adverse health.

Finally, the contributors of depression with an elder care institution should be identified as they may differ depending on the type of elder care institutions. Lin, et al (2005) reported that the type of institution is related to depression. However, no studies in Taiwan have investigated whether the attitudes of acceptance towards institutionalization, the extent of perceived stress, the level of self-transcendence, the degree of participation in socially supportive activities, and

the impact on depression are different for various types of elder care institutions. Future studies are needed to determine these different contributors of depression.

Implications for Practice

This study presents strong preliminary evidence for geriatric practitioners in many practice areas. First, the results indicate that elders should be routinely screened for stress, self-transcendence, and depression. Those residents who show greater unwillingness to be and to remain institutionalized, have a shorter duration of residency, participate less in socially supportive activities are more likely to experience higher levels of stress, which may consequently lower self-transcendence and increase the incidence of depression. These results suggest indicators of when elders may be vulnerable to be depression that elder care practitioners should be aware of and screen for these factors.

Second, this study demonstrates that the psychosocial mechanism of depression requires psychosocial interventions to reduce depression. Numerous previous studies indicated that depression is related to poor physical conditions and social disadvantages such as lower education level and poor income (Jones, et al., 2003; Lin, et al., 2005; Popović, Kalasić, Milosević, Erceg, Despotović & Davidović, 2008). While some physical conditions can be treated, the aging process itself cannot be stopped. Also any social disadvantages these elders have experienced cannot now be changed. However, psychosocial interventions, for instance designing meaningful and enjoyable socially supportive activities and support groups, directly aimed at alleviating depression are more successful and beneficial approach. For elders, recovering their youthful physical functioning is not an achievable goal. Improving the quality of

institutional care to maintain a psychological and social sense of well-being and be free from depression is a more practical expectation.

Thus, elder care practitioners should develop interventions that can help residents adjust to institutional life and benefit their psychosocial well-being. During the process of institutionalization, practitioners should be fully responsible for continuously appraising elderly residents' mental distress related to institutionalization; creating a stress-free, home-like residential environment; and designing meaningful and enjoyable activities. Further, the functions and outcomes of all activities designed for residents need to be evaluated.

Finally, institutionalization is not the end of life. In fact, institutionalization transitions require adjustments. The consequence of institutionalization can be another happy journey of late life, not a stressful or depressed life. Many interventions have been suggested in the earlier discussion of each hypothesis result. The ultimate purpose of recommended interventions in this study is to minimize any possible adverse mental health and maximize the quality of life in the institution.

Despite some limitations, the model in this study significantly explains the causal relationships between many possible variables and is able to strongly predict depression in institutionalized Taiwanese elders. Chinese cultural values and beliefs aid in understanding the psychosocial process of depression. More importantly, a cultural sensitive instrument of the Socially Supportive Activity Inventory has been developed and tested congruent with the study population to generate very reliable data that is vital to this study.

Conclusion

In conclusion, this study found that 48.5% of the sample exhibited depression. But, only 3.1% of the study sample was diagnosed with depression by physicians, indicating the overwhelming presence of under-diagnosed depression in elder care institutions in Taiwan. Approximately half of the elderly residents are institutionalized by deferring to the decision made by their children. A cultural-psychosocial model was developed for this study to focus on the roles that self-transcendence and socially supportive activities play in explaining the psychosocial mechanism of depression.

An elder's expectation of filial responsibility is so strong in Chinese culture that elders are not able to alter their expectations to cope with being and remaining institutionalized. Further, their high expectations of filial responsibility are independent of their levels of stress and depression. There is, however, a direct relationship between the unwillingness to be institutionalized and perceived stress and between the unwillingness to remain institutionalized and perceived stress. An elder's belief in destiny, as a Chinese view of life helps to cope with this perceived stress and move him or her towards acceptance. These findings are different from western culture. While perceived stress and self-transcendence both predict depression, only higher levels of self-transcendence can mediate the relationship between perceived stress and depression. Among all proposed predictors, self-transcendence is the most significant predictor of depression.

Meaningful and enjoyable participation in socially supportive activities can alleviate depression. For elderly residents, active participation in socially supportive activities is a coping mechanism which alleviates the perception of stress and promotes self-transcendence. These

preliminary, noteworthy findings indicate self-transcendence and socially supportive activities have important influences on alleviating depression. This model emphasizes that cultural effects on mental health are as important as psychosocial contributors. Both will benefit from future studies.

APPENDIX A HUMAN SUBJECT PROTECTION APPROVAL

THE UNIVERSITY OF ARIZONA

Human Subjects Protection Program

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23 May 2008

Yu-Chuan Hsu, Ph.D. Student
Advisor: Elaine Jones, Ph.D.
College of Nursing
1305 N. Martin
PO Box 210203

RE: **ESTABLISHING THE PSYCHOMETRICS OF A CHINESE VERSION OF THE SELF-TRANSCENDENCE SCALE FOR USE IN OLDER ADULTS IN TAIWAN**

Dear Ms. Hsu:

We received documents concerning your above cited project. Regulations published by the U.S. Department of Health and Human Services [45 CFR Part 46.101(b) (2)] exempt this type of research from review by our Institutional Review Board. **Note: A copy of your Disclosure Form, with IRB approval stamp affixed, is enclosed for duplication and use in enrolling subjects.**

Please be advised that **clearance from academic and/or other official authorities for site(s) where proposed research is to be conducted must be obtained prior to performance of this study. Evidence of this must be submitted to the Human Subjects Protection Program office.**

Exempt status is granted with the understanding that no further changes or additions will be made either to the procedures followed or to the consenting instrument(s) used (copies of which we have on file) without the review and approval of the Institutional Review Board. Any research related physical or psychological harm to any subject must also be reported to the appropriate committee.

Thank you for informing us of your work. If you have any questions concerning the above, please contact this office.

Sincerely,

Rebecca Dahl, R.N., Ph.D.
Director
Human Subjects Protection Program

cc: Departmental/College Review Committee

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29 October 2008

Ya-Chuan Hsu, Ph.D. Student
Advisor: Elaine Jones, Ph.D.
College of Nursing
1305 N. Martin
PO Box 210203

RE: EVALUATING THE RELIABILITY OF THE NEW CHINESE VERSION OF THE SOCIALLY SUPPORTIVE ACTIVITY INVENTORY

Dear Ms. Hsu:

We received documents concerning your above cited project. Regulations published by the U.S. Department of Health and Human Services [45 CFR Part 46.101(b) (2)] exempt this type of research from review by our Institutional Review Board. **Note: Copies of your Disclosure Forms (English and Chinese, with IRB approval stamp affixed, are enclosed for duplication and use in enrolling subjects.**

Please be advised that **clearance from academic and/or other official authorities for site(s) where proposed research is to be conducted must be obtained prior to performance of this study. Evidence of this must be submitted to the Human Subjects Protection Program office.**

Exempt status is granted with the understanding that no further changes or additions will be made either to the procedures followed or to the consenting instrument(s) used (copies of which we have on file) without the review and approval of the Institutional Review Board. Any research related physical or psychological harm to any subject must also be reported to the appropriate committee.

Please let us know how we are doing! A short survey is now available on Survey Monkey at the link below. Your feedback is anonymous, unless you choose to provide contact information for follow-up. Thank you.

http://www.surveymonkey.com/s.aspx?sm=rI9_2bmTsWTndZvlolofEKng_3d_3d

Thank you for informing us of your work. If you have any questions concerning the above, please contact this office.

Sincerely,

Rebecca Dahl, R.N., Ph.D.
Director
Human Subjects Protection Program

cc: Departmental/College Review Committee

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Human Subjects
Protection Program

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Tucson, AZ 85724-5137
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http://www.irb.arizona.edu

October 29, 2008

Ya-Chuan Hsu, Doctoral Student
Advisor: Terry Badger, PhD
Nursing
PO Box 210203

RE: **PROJECT NO. 08-0915-02** A CULTURAL-PSYCHOSOCIAL MODEL FOR DEPRESSION IN ELDER CARE INSTITUTIONS: THE ROLES OF SOCIALLY SUPPORTIVE ACTIVITY AND SELF-TRANSCENDENCE

Dear Ya-Chuan Hsu:

We received your research proposal as cited above. The procedures to be followed in this study pose no more than minimal risk to participating subjects and have been reviewed by the Institutional Review Board (IRB) through an Expedited Review procedure as cited in the regulations issued by the U.S. Department of Health and Human Services [45 CFR Part 46.110(b)(1)] based on their inclusion under *research category 7*. Although full Committee review is not required, the committee will be informed of the approval of this project. This project is approved with an **expiration date of October 28, 2009**. Please make copies of the attached IRB stamped consent documents to consent your subjects.

The Institutional Review Board (IRB) of the University of Arizona has a current ***Federalwide Assurance*** of compliance, ***FWA00004218***, which is on file with the Department of Health and Human Services and covers this activity.

Clearance from official authorities for sites where proposed research is to be conducted (Site Authorization Letters) must be obtained prior to performance of this study at those sites. Evidence of this must be submitted to the Human Subjects Protection Office.

Approval is granted with the understanding that no further changes or additions will be made either to the procedures followed or the consent form(s) used (copies of which we have on file) without the knowledge and approval of the Institutional Review Board. Any research related physical or psychological harm to any subject must also be reported to the appropriate committee. Approval is also granted with the condition that all site authorization letters will be submitted to the IRB prior to data collection.

A university policy requires that all signed subject consent forms be kept in a permanent file in an area designated for that purpose by the Department Head or comparable authority. This will assure their accessibility in the event that university officials require the information and the principal investigator is unavailable for some reason.

Sincerely yours,

Rebecca W. Dahl, Ph.D.
IRB Member

EGJ/rkd
Cc: Departmental/College Review Committee

APPENDIX B: INSTRUMENTS (ENGLISH)

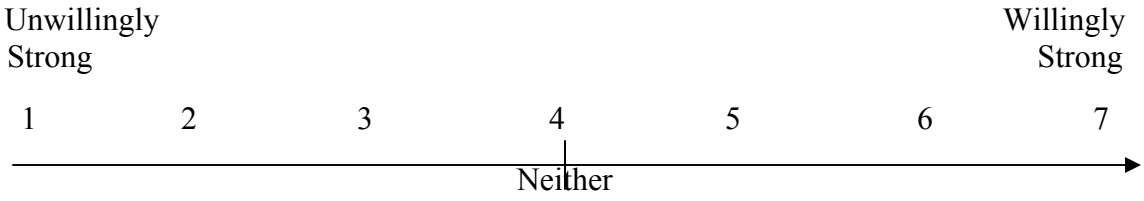
ID: _____

Initial Date: _____

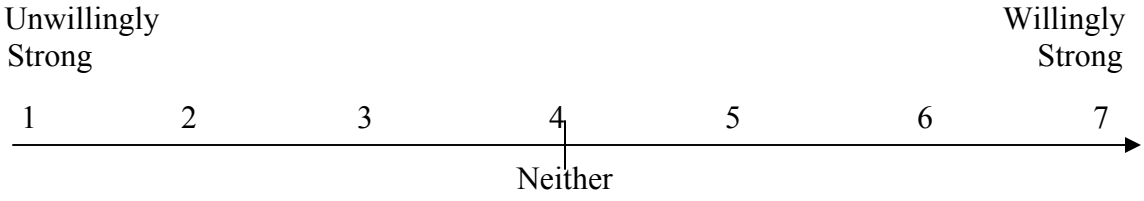
Demographic Questionnaire

1. Age: _____
2. Gender: ☐ Male ☐ Female
3. Ethnics: ☐ Mainlanders ☐ Fujienese ☐ Hakka ☐ Aboriginal islanders
4. Education: ☐ Illiterate ☐ Literate (no formal education) ☐ Elementary ☐ Junior high ☐ Senior high ☐ Undergraduate ☐ Graduate
   Number of year attended formal school _____
5. Marital status: ☐ Married ☐ Single ☐ Divorced ☐ Widow
6. Financial status: ☐ Just make demands meet ☐ Have some savings ☐ Adequate ☐ Poor
7. Religious belief: ☐ Traditional believer ☐ Taoism ☐ Buddhist ☐ Christian ☐ Catholic ☐ Muslim ☐ Other ☐ none
8. Number of Children: _____
9. Length of stay in institute (month): _____
10. Type of elder care institution? ☐ skilled nursing home ☐ senior center/home ☐ intermediated care nursing home ☐ mixed skilled and intermediate care nursing home
11. Have been diagnosed with depression? ☐ Yes ☐ No
12. Do you expect your children to visit you? ☐ Yes ☐ No
    If yes, how often? ☐ Daily ☐ once a weekly ☐ 2-3 times a week ☐ once a month ☐ 2-4 times a month ☐ Once per two months ☐ Once per three months ☐ During holidays ☐ As many as they can ☐ Other _____

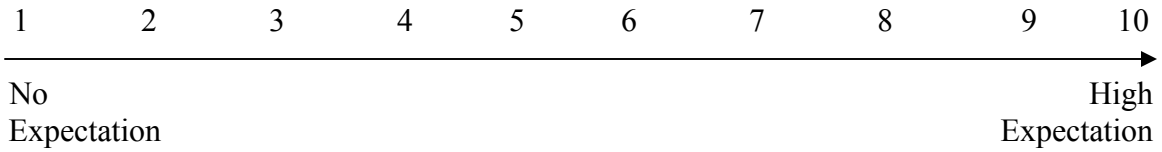
14. How willing were you to come here to live? (Circle the number that shows your level of willingness)



15. How willing are you to be here now? (Circle the number that shows your level of willingness)



15. Do you believe that your children are caring for you the way children are supposed to care for their elderly parents? (Circle the number that matches your expectation.)



Why do you think that? (Think about question 15 and write down any thoughts below)

Short Portable Mental Status Questionnaire

Question	Answer	
1. What is the date today?	Correct	Incorrect
2. What day of the week is it?	Correct	Incorrect
3. Who is the President of Taiwan now?	Correct	Incorrect
4. Who was the President just before him?	Correct	Incorrect
5. Subtract 3 from 20 and continue subtract 3 from each new result, all the way down score sheet?	Correct	Incorrect
6. What is your telephone number?	Correct	Incorrect
7. What is your street address?	Correct	Incorrect
8. What was your mother's maiden name?	Correct	Incorrect
9. What is the name of this place?	Correct	Incorrect
10. When were you born?	Correct	Incorrect
Total		

0 – for correct answer – 1 for incorrect answer

☐ 3 elementary education ☐ 2 beyond elementary education

Perceived Stress Scale- 10 Item

Instructions: The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

2. In the last month, how often have you felt that you were unable to control the important things in your life?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

3. In the last month, how often have you felt nervous and "stressed"?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

5. In the last month, how often have you felt that things were going your way?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

7. In the last month, how often have you been able to control irritations in your life?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

8. In the last month, how often have you felt that you were on top of things?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

9. In the last month, how often have you been angered because of things that were outside of your control?

   ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

16. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

    ___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

Self-Transcendence Scale

DIRECTIONS: Please indicate the extent to which each item below describes you. There are no right or wrong answers. I am interested in your frank opinion. As you respond to each item, think of how you see yourself at this time of your life. Circle the number that is the best response for you.

At this time of my life, I see myself as:		Not at all	Very little	Some-what	Very much
1.	Having hobbies or interests I can enjoy.	1	2	3	4
2.	Accepting myself as I grow older.	1	2	3	4
3.	Being involved with other people or my community when possible.	1	2	3	4
4.	Adjusting well to my present life situation.	1	2	3	4
5.	Adjusting to changes in my physical abilities.	1	2	3	4
6.	Sharing my wisdom or experience with others.	1	2	3	4
7.	Finding meaning in my past experiences.	1	2	3	4
8.	Helping others in some way.	1	2	3	4
9.	Having an ongoing interest in learning.	1	2	3	4
10.	Able to move beyond some things that once seemed so important.	1	2	3	4
11.	Accepting death as a part of life.	1	2	3	4
12.	Finding meaning in my spiritual beliefs.	1	2	3	4
13.	Letting others help me when I may need it.	1	2	3	4
14.	Enjoying my pace of life.	1	2	3	4
15.	Dwelling on my past losses.	1	2	3	4

Thank you very much for completing these questions. On the back of this sheet, please write down any additional comments that may help us understand your views.

Geriatric Depression Scale
(short form)

Choose the best answer for how you have felt over the past week:

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

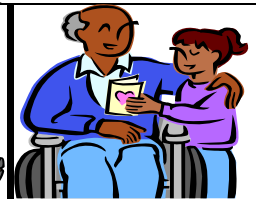
12. Do you feel pretty worthless the way you are now? YES / NO

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

Socially Supportive Activity Inventory

Social contacts with family members and friends including visits and phone calls	**Do you participate this activity?**											
    	*Yes*						*No*					
	How often do you participate?											
	Mon	Tue	Wed	Thur	Fri	Sat	Sun	1-2 /mon	≥3 /mon	1-2 /year	3-4 /year	≥ 5 /year
	How meaningful is participation to your life?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		
	How much do you enjoy participating in it?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		

Chatting with acquaintances	**Do you participate this activity?**											
   	*Yes*						*No*					
	How often do you participate?											
	Mon	Tue	Wed	Thur	Fri	Sat	Sun	1-2 /mon	≥3 /mon	1-2 /year	3-4 /year	≥ 5 /year
	How meaningful is participation to your life?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		
	How much do you enjoy participating in it?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		

<table>
<tr><td>Holiday-related activities</td><td colspan="12">Do you participate this activity?</td></tr>
<tr><td rowspan="8">  </td><td colspan="6">Yes</td><td colspan="6">No</td></tr>
<tr><td colspan="12">How often do you participate?</td></tr>
<tr><td>Mon</td><td>Tue</td><td>Wed</td><td>Thur</td><td>Fri</td><td>Sat</td><td>Sun</td><td>1-2 /mon</td><td>≥3 /mon</td><td>1-2 /year</td><td>3-4 /year</td><td>≥ 5 /year</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="12">How meaningful is participation to your life?</td></tr>
<tr><td colspan="3">Not at all (1)</td><td colspan="3">Very little (2)</td><td colspan="3">Somewhat (3)</td><td colspan="3">Very much (4)</td></tr>
<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td colspan="12">How much do you enjoy participating in it?</td></tr>
<tr><td colspan="3">Not at all (1)</td><td colspan="3">Very little (2)</td><td colspan="3">Somewhat (3)</td><td colspan="3">Very much (4)</td></tr>
<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td>Cognitive games</td><td colspan="12">Do you participate this activity?</td></tr>
<tr><td rowspan="8">  </td><td colspan="6">Yes</td><td colspan="6">No</td></tr>
<tr><td colspan="12">How often do you participate?</td></tr>
<tr><td>Mon</td><td>Tue</td><td>Wed</td><td>Thur</td><td>Fri</td><td>Sat</td><td>Sun</td><td>1-2 /mon</td><td>≥3 /mon</td><td>1-2 /year</td><td>3-4 /year</td><td>≥ 5 /year</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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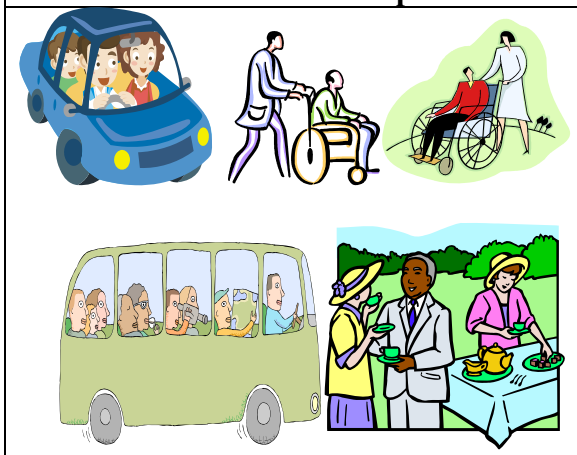
<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td colspan="12">How much do you enjoy participating in it?</td></tr>
<tr><td colspan="3">Not at all (1)</td><td colspan="3">Very little (2)</td><td colspan="3">Somewhat (3)</td><td colspan="3">Very much (4)</td></tr>
<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
</table>

Performances and visits by single or group organization	**Do you participate this activity?**											
	*Yes*						*No*					
	How often do you participate?											
	Mon	Tue	Wed	Thur	Fri	Sat	Sun	1-2 /mon	≥3 /mon	1-2 /year	3-4 /year	≥ 5 /year
	How meaningful is participation to your life?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		
	How much do you enjoy participating in it?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		
Entertainment	**Do you participate this activity?**											
	*Yes*						*No*					
	How often do you participate?											
	Mon	Tue	Wed	Thur	Fri	Sat	Sun	1-2 /mon	≥3 /mon	1-2 /year	3-4 /year	≥ 5 /year
	How meaningful is participation to your life?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		
	How much do you enjoy participating in it?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		

Pleasure trips	**Do you participate this activity?**											
	*Yes*						*No*					
	How often do you participate?											
	Mon	Tue	Wed	Thur	Fri	Sat	Sun	1-2 /mon	≥3 /mon	1-2 /year	3-4 /year	≥ 5 /year
	How meaningful is participation to your life?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		
	How much do you enjoy participating in it?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		

Arts/crafts classes	**Do you participate this activity?**											
	*Yes*						*No*					
	How often do you participate?											
	Mon	Tue	Wed	Thur	Fri	Sat	Sun	1-2 /mon	≥3 /mon	1-2 /year	3-4 /year	≥ 5 /year
	How meaningful is participation to your life?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		
	How much do you enjoy participating in it?											
	Not at all (1)		Very little (2)				Somewhat (3)			Very much (4)		

<table>
<tr><th>Religious activities</th><th colspan="12">Do you participate this activity?</th></tr>
<tr><td rowspan="6">  </td><td colspan="6">Yes</td><td colspan="6">No</td></tr>
<tr><td colspan="12">How often do you participate?</td></tr>
<tr><td>Mon</td><td>Tue</td><td>Wed</td><td>Thur</td><td>Fri</td><td>Sat</td><td>Sun</td><td>1-2 /mon</td><td>≥3 /mon</td><td>1-2 /year</td><td>3-4 /year</td><td>≥ 5 /year</td></tr>
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<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td colspan="12">How much do you enjoy participating in it?</td></tr>
<tr><td colspan="3">Not at all (1)</td><td colspan="3">Very little (2)</td><td colspan="3">Somewhat (3)</td><td colspan="3">Very much (4)</td></tr>
<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td>Others</td><td colspan="12">Do you participate this activity?</td></tr>
<tr><td rowspan="6">(Write down the name of other socially supportive activities)</td><td colspan="6">Yes</td><td colspan="6">No</td></tr>
<tr><td colspan="12">How often do you participate?</td></tr>
<tr><td>Mon</td><td>Tue</td><td>Wed</td><td>Thur</td><td>Fri</td><td>Sat</td><td>Sun</td><td>1-2 /mon</td><td>≥3 /mon</td><td>1-2 /year</td><td>3-4 /year</td><td>≥ 5 /year</td></tr>
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<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
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APPENDIX C: INSTRUMENTS (CHINESE)

編號

日期

簡易心智量表

我們現在問些簡單的問題，想知道您記性怎樣，這些問題不是每個人都能記得的，請盡量回答。

題目	答案	
1. 今天是星期幾？	正確	不正確
2. 今天是幾號？	正確	不正確
3. 誰是現任總統？	正確	不正確
4. 誰是上一任總統？	正確	不正確
5. 20 減去 3，再減去 3，一直減下去，減五次，答案是什麼？	正確	不正確
6. 你家電話號碼是幾號？	正確	不正確
7. 你家住址？	正確	不正確
8 您母親姓氏是什麼？	正確	不正確
9 您現在所在地方是何處？	正確	不正確
10.您的生肖 (或是生日)？	正確	不正確
總　分		

0 正確　1 不正確　　**≦3 小學畢業　≦2 小學以上畢業**

編號：
日期：

基 本 資 料

1. 年齡：_____

2. 性別：□男 (0) □ 女 (1)

3. 省籍：□外省 (新住民) (1) □ 閩南 (2) □ 客家 (3) □ 原住民 (4)

4. 教育程度：□ 不識字 (0) □ 識字但未受正式教育 (1)
□ 小學/補校 (2) □ 國中/補校 (3) □ 高中(職) (4)
□ 大專/學 (5) □ 研究所 (碩/博士) (6)
請填寫，受教育總年數：_____

5. 婚姻狀態：□ 未婚 (1) □ 已婚/配偶尚存 (2) □ 喪偶 (3)
□ 離婚 (4) □其他 (5): _____

6. 經濟狀況：□ 差 (1) □夠用 (2) □ 尚有存款(支息) (3)

7. 宗教信仰：□ 無 (0) □ 傳統信仰 (1) □ 道教 (2) □ 佛教 (3)
□ 一貫道 (4) □ 基督教 (5) □ 天主教 (6) □ 回教 (7)
□ 其他 (8)：___

8. 生育子女數：_____

9. 入住機構、院所有多久了？_____月

10. 入住機構類型：□ 護理之家 (1) □ 安養中心 (2) □ 養護中心 (3)
□ 安養/養護 (4)
□

11. 是否有診斷為憂鬱? □ 沒有 (0) □ 有 (1)

12.您是否會期待您的子女來看您？□ 會 (1) □ 不會 (2)

您期待他們來看您的頻率為何？

□每天 (1) □每星期一次 (1) □一星期 2-3 次 (2)
□一個月一次 (3) □一個月 2-4 次 (4) □兩個月一次 (5) □每三個月一次 (6) □每逢假日 (7) □ 儘他們所能的來 (8) □ 其他 (9)

13. **當初**您入住機構、院所時，您的意願如何？(請圈選您的意願程度)

無意願 1 2 3 4 5 6 7 非常強的意願

隨子孫安排

14.您**現在**繼續住在機構、院所的意願呢？(請圈選您的意願程度)

無意願 1 2 3 4 5 6 7 非常強的意願

隨子孫安排

您是否認為子女應該照顧自己的年邁雙親？(請圈選您心裡所認同的程度)

1 2 3 4 5 6 7 8 9 10

不必要 非常應該

為何第 15 題您會有如此的看法？(請您就您的認知回答，並請提供您的想法以供進一步的學習及研究)

壓 力 感 受 量 表

編 號：

	從來不會	幾乎不會	有時候會	常常會	一直都會
1. 在**過去一 個(月)內**，您是否經常會因為一些突發的事情，而讓心情變得不好？	**0**	**1**	**2**	**3**	**4**
2. 在**過去一 個(月)內**，您是否經常會覺得您沒有辦法控制生活裡一些重要的事情？	**0**	**1**	**2**	**3**	**4**
3. 在**過去一 個(月)內**，您是否經常會覺得緊張而且有壓力？	**0**	**1**	**2**	**3**	**4**
4. 在**過去一 個(月)內**，您對自己處理個人問題的能力，是否經常會覺得有信心？	**0**	**1**	**2**	**3**	**4**
5. 在**過去一 個(月)內**，您是否經常會覺得一切的事情都很順心如意（台語: 如你的意）？	**0**	**1**	**2**	**3**	**4**
6. 在**過去一 個(月)內**，您是否經常會覺得無法應付您必須要做的事？	**0**	**1**	**2**	**3**	**4**
7. 在**過去一 個(月)內**，對於生活中一些容易惹人生氣的小事情，您是否經常能夠控制得宜？	**0**	**1**	**2**	**3**	**4**
8. 在**過去一 個(月)內**，您是否經常會覺得事情都在您可以控制的範圍內？	**0**	**1**	**2**	**3**	**4**
9. 在**過去一 個(月)內**，您是否經常會因為一些您無法控制的事情，而讓您感到生氣？	**0**	**1**	**2**	**3**	**4**
10. 在**過去一 個(月)內**，您是否經常覺得困難已經堆積如山(太多)，讓您無法克服（台語: 解決)?	**0**	**1**	**2**	**3**	**4**

中文版自我超越問卷表

編號:

敬愛的前輩您好：

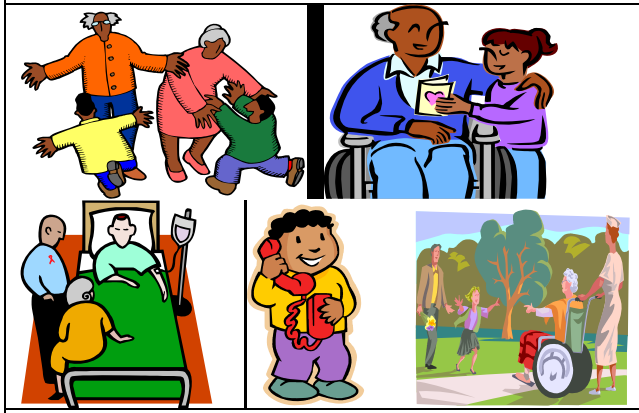
本研究為瞭解「人們自我超越」之內涵與現況，請您閱讀以下題目的陳述，心想「**在你生命的此刻，您自己是如何看待自我**」，然後，請就您個人知覺與感受的程度，在答案欄中**圈選**出最適合您感受的數字，此問卷並沒有正確或錯誤的答案，懇祈惠賜卓見，不勝感荷。

題目	一點也不	僅有一些	有一些	非常多
在我生命的當下， 1. 我樂於現有的嗜好或興趣	1	2	3	4
2. 我老了，我還是能夠接受我自己	1	2	3	4
3. 我仍然投入人群或社區中	1	2	3	4
4. 我可以好好地調適我現今的生活狀況	1	2	3	4
5. 我可以接受並調適我身體功能的改變	1	2	3	4
6. 我願意與他人分享我的智慧或經驗	1	2	3	4
7. 我可以從過往的經驗中獲得意義	1	2	3	4
8. 我會用一些方法來幫助他人	1	2	3	4
9. 我對學習的興趣從不間斷	1	2	3	4
10. 面對重要的事情時，我能超越問題本身來思考和解決	1	2	3	4
11. 我可以接受死亡是生命的一部分	1	2	3	4
12 我能從我的信念上發現生命意義	1	2	3	4
13. 當我有不時之需時，我願意接受他人協助	1	2	3	4
14. 我享受當下的生活步調	1	2	3	4
15. 我活在過往的失落中	1	2	3	4

請您在背後寫下任何額外的看法，您的看法將有助於我們更能了解您的想法。

支 持 性 社 會 活 動 評 量 表

下面的問題是想知道您在此中心/院所內參加社會活動的情形，請依您目前實際參加的活動以及您的感受為何，勾選最適合的答案。　編號:

<table>
<tr><td colspan="4">家人和知心朋友的社交性電話聯絡或探訪</td><td colspan="11">您有沒有參加此類活動？</td></tr>
<tr><td colspan="4" rowspan="3">  </td><td colspan="7">有</td><td colspan="4">沒有</td></tr>
<tr><td colspan="11">您參加此種活動的時間或頻率為何？</td></tr>
<tr><td>星期一</td><td>星期二</td><td>星期三</td><td>星期四</td><td>星期五</td><td>星期六</td><td>星期日</td><td>一個月 1-2 次</td><td>一個月 3 次以上</td><td>一年 1-2 次</td><td>一年 3-4 次</td><td>一年 5 次以上</td></tr>
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<tr><td colspan="4" rowspan="3"></td><td colspan="11">您認為參加此活動對您生活上有多大意義？</td></tr>
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<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td colspan="4">與熟人聊天(如:室友、志工、他人的訪客)</td><td colspan="11">您有沒有參加此類活動？</td></tr>
<tr><td colspan="4" rowspan="3">  </td><td colspan="7">有</td><td colspan="4">沒有</td></tr>
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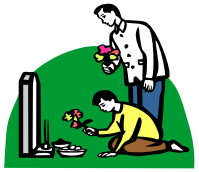
</table>

註(1): 家人和知心朋友的社交性電話聯絡或探訪 朋友係指在入住機構前原有所認識的朋友

註(2): 熟人聊天係指單獨一對一或與多人聊天，**不包括機構工作人員**

<table>
<tr><td>節慶相關性活動</td><td>您有沒有參加此類活動？</td></tr>
<tr><td rowspan="6">          </td><td>有</td><td>沒有</td></tr>
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星期一 星期二 星期三 星期四 星期五 星期六 星期日 一個月 1-2 次 一個月 3 次以上 一年 1-2 次 一年 3-4 次 一年 5 次以上</td></tr>
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一點也沒有 (1) 有一點點 (2) 有一些 (3) 有很多 (4)</td></tr>
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<tr><td colspan="2"></td></tr>
<tr><td>認知/益智性活動</td><td>您有沒有參加此類活動？</td></tr>
<tr><td rowspan="6">       </td><td>有</td><td>沒有</td></tr>
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一點也沒有 (1) 有一點點 (2) 有一些 (3) 有很多 (4)</td></tr>
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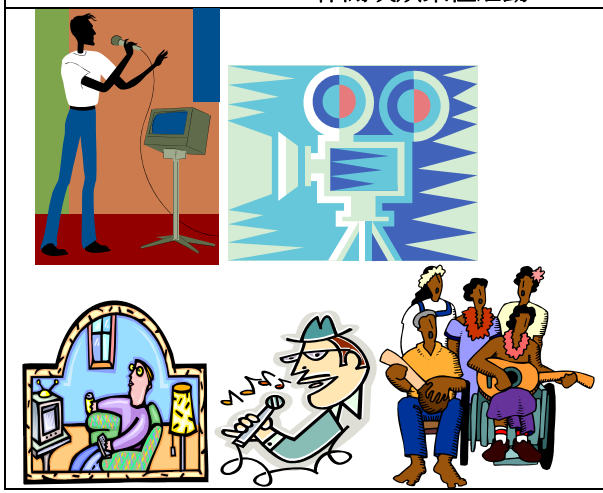
一點也不 (1) 一點點 (2) 有一些 (3) 非常樂於 (4)</td></tr>
<tr><td colspan="2"></td></tr>
</table>

註(3):**節慶相關性活動** 例如：新年、農曆春節、除夕、中元節、元宵節、七夕、清明節、端午節、母親節、父親節、中秋節、九九重陽節、聖誕節、生日、、等等
註(4):**認知/益智性活動** 例如：麻將、紙牌遊戲、撿紅點、棋盤遊戲、懷舊療法、、等等

各類單人或團體組織到院的表演或訪視	您有沒有參加此類活動？											
	*有*						*沒有*					
	您參加此種活動的時間或頻率為何？											
	星期一	星期二	星期三	星期四	星期五	星期六	星期日	一個月 1-2 次	一個月 3 次以上	一年 1-2 次	一年 3-4 次	一年 5 次以上
	您認為參加此活動對您生活上有多大意義？											
	一點也沒有 (1)			有一點點 (2)			有一些 (3)			有很多 (4)		
	您樂於參加此活動嗎？											
	一點也不 (1)			一點點 (2)			有一些 (3)			非常樂於 (4)		
休閒或娛樂性活動	您有沒有參加此類活動？											
	*有*						*沒有*					
	您參加此種活動的時間或頻率為何？											
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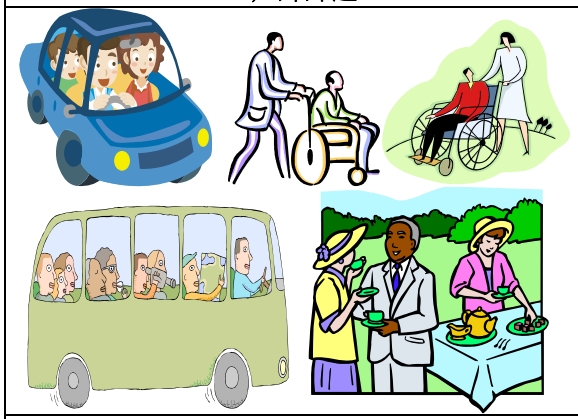
	一點也沒有 (1)			有一點點 (2)			有一些 (3)			有很多 (4)		
	您樂於參加此活動嗎？											
	一點也不 (1)			一點點 (2)			有一些 (3)			非常樂於 (4)		

註(5):**各類單人或團體組織到院的表演或訪視** 例如：團康活動、慈善團體訪視、幼稚園學童表演、個人樂器表演、、等等

註(6):**休閒或娛樂性活動** 例如:卡拉 ok 歌唱、電影欣賞、團體電視或影帶節目欣賞、老歌欣賞、、等等

戶外郊遊	您有沒有參加此類活動？											
	*有*						*沒有*					
	您參加此種活動的時間或頻率為何？											
	星期一	星期二	星期三	星期四	星期五	星期六	星期日	一個月 1-2 次	一個月 3 次以上	一年 1-2 次	一年 3-4 次	一年 5 次以上
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	您樂於參加此活動嗎？											
	一點也不 (1)			一點點 (2)			有一些 (3)			非常樂於 (4)		

團體手工藝活動/課程	您有沒有參加此類活動？											
	*有*						*沒有*					
	您參加此種活動的時間或頻率為何？											
	星期一	星期二	星期三	星期四	星期五	星期六	星期日	一個月 1-2 次	一個月 3 次以上	一年 1-2 次	一年 3-4 次	一年 5 次以上
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	您樂於參加此活動嗎？											
	一點也不 (1)			一點點 (2)			有一些 (3)			非常樂於 (4)		

註(7):**戶外郊遊** 例如: 麥當勞打牙祭、超市購物、公園野餐、景點知性之旅、參觀展覽、、等

註(8):**工藝活動/課程** 例如：摺(剪)紙、編織、繪畫、烹飪、繡花、、等等

<table>
<tr><td>宗教性活動</td><td colspan="11">您有沒有參加此類活動？</td></tr>
<tr><td rowspan="6">  </td><td colspan="6">有</td><td colspan="5">沒有</td></tr>
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<tr><td rowspan="3"></td><td colspan="11">您樂於參加此活動嗎？</td></tr>
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<tr><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td></tr>
<tr><td>其他</td><td colspan="11">您有沒有參加此類活動？</td></tr>
<tr><td rowspan="6">請寫下活動名稱</td><td colspan="6">有</td><td colspan="5">沒有</td></tr>
<tr><td colspan="11">您參加此種活動的時間或頻率為何？</td></tr>
<tr><td>星期一</td><td>星期二</td><td>星期三</td><td>星期四</td><td>星期五</td><td>星期六</td><td>星期日</td><td>一個月 1-2 次</td><td>一個月 3 次以上</td><td>一年 1-2 次</td><td>一年 3-4 次</td><td>一年 5 次以上</td></tr>
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</table>

註(9):**宗教性活動** 例如：神職人員至院所帶(代)禱、早課和/或晚課、宗教室內禮佛或供佛、宗教告解、、、等等

註(10):**其他** 無法歸類於以上九大類型活動，**但不包括復健相關活動、運動、體適能活動**

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