Social support, sense of control, and depression among elderly parents

by

Haeseon Lee

A Thesis Submitted to the

Graduate Faculty in Partial Fulfillment of the

Requirements for the Degree of

MASTER OF SCIENCE

Department: Human Development and Family Studies
Major: Family Environment

Iowa State University
Ames, Iowa

1992

TABLE OF CONTENTS

	Page
CHAPTER 1. INTRODUCTION AND LITERATURE REVIEW	1
Purpose of the Study	1
Objectives of the Study	2
Need for the Study	3
Literature Review	6
Depression	6
Social support	11
Sense of personal control	16
Social support, sense of control, and depression	21
Conceptual Model	24
CHAPTER 2. METHODOLOGY	26
Procedures	26
Source of Data	27
Operationalization of Variables	28
Dependent variable	28
Independent variable	28
Statistical Analysis	33
CHAPTER 3. RESULTS	35
Pearson Correlation	35
Path Analysis	38
Family support	40
Sense of control over life	43
Depression	45
Decomposition of effects	48
CHAPTER 4. SUMMARY AND CONCLUSIONS	54
Summary	54
Testing of the Hypotheses	55
Conclusions	56

Implications 58

REFERENCES 60

ACKNOWLEDGEMENTS 68

APPENDIX 69

CHAPTER 1. INTRODUCTION AND LITERATURE REVIEW

Purpose of the Study

The purpose of this study is to explore the relationships between social support, sense of control, and depression for older Americans. More specifically, the study is designed to examine the effects of family support by adult children, the self-assessment of control over life, and depression among a sample of individuals 60 and over in the state of Iowa.

Research on psychological well-being for older Americans has been examined in various ways in the psychological, behavioral, and social sciences; mediating factors of stress-related outcomes are an especially well-known empirical theme in recent research. Studies on mediators of stress-related outcomes (e.g., depression) show two broad categories (Sandler & Lakey, 1982): dispositional characteristics of individuals (e.g., traits, coping styles) and characteristics of individual's social environment (e.g., social supports) (Dohrenwend, 1978; Johnson & Sarason, 1978).

One dispositional characteristics of individuals is a personal sense of control belief. Several studies demonstrate that the personality characteristic of sense of control moderates the negative effects of stress, and of depression (Johnson & Sarason, 1978; Kobasa, 1979). Stress and depression are closely related to each other, and depression is known as a common form of affective expression in stressful settings (Baum, Davidson, Singer & Street, 1987).

Social support, which is the second category of moderating factors of stress-related outcomes, has both theoretical (Caplan, 1974; Cobb, 1976) and empirical support (Epley, 1974). Caplan (1974) suggests that social support buffers stress by providing the individual with emotional support, guidance, and assistance with tasks.

Previous research has investigated two categories of mediators of stress-related outcomes separately; however, considerably less attention has been given to examining the joint effects of the two mediators in conjunction with depression. In this thesis, the direct as well as the indirect effects of social support and sense of control are investigated in their relationship with depression. Understanding the process by which the direct and the indirect effects occur would emphasize the importance of the roles of social support and sense of control and their contributions to depression in older persons.

Objectives of the Study

The objectives of the study are:

1. To examine the effects of social support, sense of control, and sociodemographic variables on depression.
2. To investigate the relationship of social support and sociodemographic variables on sense of control.
3. To explore the relationship between social support and depression.
4. To investigate the relationship between social support, sense of control, and depression.

5. To examine the correlation between social support and sociodemographic variables.
6. To investigate the effect of sociodemographic variables on depression.
7. To explore the effect of sociodemographic variables on sense of control.

Need for the Study

It has been recognized that depression is a serious problem in elderly individuals. Experiences of aging often include retirement, bereavement, death, and physical illness, and aging is also commonly thought to consist of mental, physical, and social declining. Among the elderly population, generally after age 65, some elderly are especially vulnerable to depression because of isolation, negative self-image, loss of autonomy, and loneliness associated with aging experiences (Delon & Wenston, 1989).

As the population of elderly persons is increasing rapidly, the proportion of depressed older individuals is growing. Epidemiological studies suggest that depression is evident in over 30 percent of elderly individuals in institutions and, when assessed by symptom checklists, between 10 percent and 45 percent of elderly persons in the community (Blazer, 1983) appear to exhibit depressive symptoms. Conceptually and empirically, depression is negatively related to life satisfaction, morale, and well-being (Morris, Wolf & Klerman, 1975).

When individuals become depressed, there may come a time when they need help from others. Research on the effect of social support

demonstrates significant impacts on psychological and physical well-being (Dean, Kolody & Wood, 1990). In particular, family-related social support appears to have the most beneficial impacts for elderly persons. Despite the myth that contemporary families are alienated from their elderly, studies have reported the strong intergenerational relationship and prominence of families in the support networks of older parents (Brody, 1981; Mercier & Powers, 1984). This intergenerational tie results in beneficial support for elderly parents, and the actual support of children seems to moderate the depression that older parents might experience.

Meanwhile, the causes of depression have been examined in different dimensions of recent research. Various socioeconomic factors and biological components may produce depressive symptoms; furthermore, the lack of social support contributes to the creation of depressive symptoms (Aneshensel & Stone, 1982). For those reasons, the significance of social support linked to depression in later life should not be ignored.

Another consideration that recent research focuses on is the influence of personal sense of control over negative outcomes. Studies have shown that sense of control is associated with depression (Beck, 1976; Bennassi, Sweeney & Dufor, 1988; Krause, 1987a; Mirowsky & Ross, 1990; Seligman, 1975). Sense of control, or, more specifically pertinent to this study, the feeling of control over life, is a personality dimension, which is generally defined as the ability to influence one's environment (Schulz, 1976). It also relates to the

perception of the outcomes of one's actions. Some individuals feel that what occurs to them is the result of their own behavior (internal control), while others perceive the outcomes as a result of fate, luck, or chance, thus beyond their control (external control) (Rotter, 1966).

Many studies show that men, people with higher education, whites, and those with a higher socioeconomic status have a greater tendency to see their experiences as a consequence of their behaviors (Joe, 1971; Nehrke, Hulicka & Morganti, 1980). The results of studies also indicate that the influence of age on control over life is not clearly delineated. While some studies show a decline in the feeling of control with age (Abel & Hayslip, 1987; Siegler & Gatz, 1985), others demonstrate no decrease with age (Fawcett, Stonner & Zepelin, 1980; Ryckman & Malikiosi, 1975; Nehrke et al., 1980). In addition, Lachman (1986) suggests that the control orientation of individuals is not static. It may change over time because of different situations, or in response to accidental happenings or natural events. Nevertheless, the evidence is mixed as to whether sense of control changes as individuals age (Nehrke et al., 1980; Molinari & Niederehe, 1984; Ryckman & Malikiosi, 1975).

As a matter of fact, a few studies have examined the relationship of social support and sense of control with regard to depression in older persons (Krause, 1987b; Lefcourt, Martin & Saleh, 1984; Sandler & Lakey, 1982). By specifying the strengths and the directions of the relationships among social support, sense of control, and depression, it is hoped that the incidences of depression may be reduced through

meaningful interventions and programs that encourage elderly persons to get over their stressful situations.

Literature Review

The review of the literature is divided into four sections. Section One provides information about depression and its relationships with selected variables such as age and health. Sections Two and Three discuss social support, sense of control, and their relationships with depression. A possible relationship among social support, sense of control, and depression of older persons is the focus of the last section.

Depression

Depression is a major mental health problem. If the annual prevalence of depression is estimated to be 3 percent, there are about 100 million people in the world each year who suffer from clinically developed depression (Stenbeck, 1980). Although recent studies have reported a fast-increasing rate of depression in young adults and adolescents, who experience alcoholism, drug use, and suicide attempts (Klerman & Weissman, 1989; Seligman, 1989), depression in later life has been considered as the most common and troublesome mental illness facing the elderly.

The concept of depression is difficult to define in a precise way. The primary feature of most clinical depression is dysphoria - a feeling of being blue, sad, or low-spirited (Thompson, Gong, Haskins &

Gallagher, 1987). In addition, A Psychiatry Glossary (American Psychiatric Association) states:

> Slowed thinking and decreased purposeful physical activity accompany the mood change when the term is used diagnostically. This definition indicates that depression is a state of both mood change and reduced activity. Persistent grief feelings make up a clinical depression only when accompanied by marked reduction in activity. In many severe cases, this reduction involves the above-mentioned obvious slowing of thinking and movements. In other cases, often equally severe, the diminution of activity is only related to withdrawal from previous fields of interest (American Psychiatric Association, 1975, p.42).

This statement defines depression as including reduced activity in relation to depressed mood change. Other symptoms involve loss of interest, fatigue, lack of energy, sleep and appetite problems, guilt, psychomotor agitation or retardation, inability to concentrate and to make decisions, and so on. Clinical and epidemiological research has already studied depression in extensive depth.

Depression among older individuals is complicated by normal changes of aging and changes in behavior and cognition due to physical illness (Blumenthal, 1980). Changes associated with the aging process can result in social losses; losses of family, friend, occupation, and status, and depression in elderly persons is often caused by these losses, particularly the loss of family (Esser & Vitaliano, 1988).

Age and depression Many of the negative changes associated with depression tend to be related to the aging process. Depressive individuals, for instance, are prone to be less socially involved, more

internally focused (Allgood-Merten, Lewinsohn & Hops, 1990), and more likely to have lower memory performance (Herzog & Rodgers, 1989). In addition, depressive symptoms such as sleep disturbances, fatigue, apathy, and somatic complaints are often confused with incidence of the aging process (Epstein, 1976). Studies have shown that older adults can be more vulnerable to depression than are others (Eagles & Whalley, 1985; Stenback, 1980). The question, then, which must be asked, is whether older people are more depressed than other age groups. What is the relationship between age and depression? Results from the literature, however, have not consistently supported increasing depression among the elderly along with their increasing age (Gatz & Hurwicz, 1990; Lewinsohn, Rhode, Fisher & Seeley, 1991).

A study by Gatz and Hurwicz (1990) examined age differences on the 20-item Center for Epidemiological Studies Depression Scale (CES-D) that has been the most frequently used measure in the field for different age counts: 20-39 years, 40-54 years, 55-69 years and 70-98 years. On four CES-D subscales-Depressed Mood, Psychomotor Retardation, Lack of Well-being, and Interpersonal Difficulties - the aged 70-98 group marked the highest scores only on lack of well-being, and young adults scored highest on depressed mood. Overall findings concluded that age was not associated with depression.

Another study on psychosocial variables associated with depression and age (Lewinsohn et al., 1991) showed that there was no age difference in relation with depression. For older people, those who were depressed were found to have more stress, less social support, reduced social

interaction and social skill, greater interpersonal dependency, reduced use of adaptive coping behaviors, and increasing levels of other mental illness and poor health. These symptoms also could be found in young people. Increasing age however was strongly correlated with impaired auditory and visual acuity, increasing slower performance on speeded tasks, and reduced memory and respiratory capacity; thus the study emphasized that age was strongly correlated with the neuropsychological and psychophysiological function, not with depression related-psychosocial variables. The study also suggested that the aging process and depressive symptoms could be found differently, and emphasized the importance of a need to distinguish the effects of depression from the effects of aging in the elderly population with careful attention to the nature and characteristics of depression and aging.

Health and depression Unlike the controversial age variable, health has been consistently believed to be closely associated with depression of the elderly population. Among elderly persons, poor health is a risk factor for developing psychological dysfunction (Kennedy, Kelman, Thomas, Wisniewski, Metz & Bijur, 1989; O'Hara, Kohout & Wallace, 1985; Phifer & Murrell, 1986; Radloff, 1977; Rapp, Parisi & Walsh, 1988), physical illness has the largest single causal effect on depression in a sociomedical causal model of depression (Aneshensel & Yokopenic, 1985), and better health is associated with a lower prevalence of depression (O'Hara et al., 1985).

Elderly who are depressed who have physical illness can be at risk of late-life mortality as a result. Shekelle et al. (1981) found that self-reported depressive symptoms predicted mortality after age, occupation, family history, and use of cigarettes and alcohol were controlled. Among depressed individuals, the older population with acute medical illness was at a higher risk to have depression than any other groups (Rapp et al., 1988). A study by Waxman and Carner (1984) showed that 17.2 percent of outpatients in a geriatric medical practice had depressive disorders. Also, research with old veteran medical patients showed that 31 percent of subjects suffered from depressive disorders (Okimoto, Barnes, Veith, Raskind, Inui & Carter, 1982) and that 45 percent of old veteran medical inpatients showed depressive symptoms (Kitchell, Barnes, Veith, Okimoto & Raskind, 1982).

Although a reciprocal relationship between depression and physical health has been found in cross-sectional studies previously, few longitudinal studies have attempted to examine changes in health as they relate to change in depression over time. Kennedy et al. (1990) investigated longitudinal effects of health and disability and depression of 1,457 aged community residents using the CES-D scale, and found that increasing disability and declining health proceeded the emergence of depressive symptoms, which accounted for 70 percent of the variance explained by analysis. They also reported that poor health and disability impacted more on depression than did social support and undesirable life events. By focusing on changes in health and depression, the study suggested that acuity rather than severity or

chronicity of disability is more influential to the development of depressive symptoms.

In this section, research has demonstrated the importance of health status in conjunction with depression. For the elderly, in many cases, an increase in depressive symptoms is accompanied by deterioration of their health with increasing age.

Social support

Although depression has an important biological component, it is also known to have social interactional components. A number of studies have stressed the importance of social support with regard to depression. For example, at any age the deterioration of the social network is a risk factor associated with depression (Lin, Dean & Ensel, 1986). In spite of considerable variations in the definition and measurement of social support, a fairly consistent pattern of results indicates that social support is negatively related to depression. Before reviewing research on social support and depression more specifically, it is necessary to explain the concept of social support.

Definition and measurement of social support

Various studies have attempted to define and measure social support; however, the imprecision of the conceptualization of social support remains problematic. Kaplan et al. (1977) suggested that "Support is defined as the relative presence or absence of psychosocial support resources from significant others," and Lin et al. (1981) stated that social support

was "support accessible to an individual through social ties to other individuals, groups and the large community. Social support identifies the resources that are available to the individual in a crisis." In these definitions, "support and resources" are not defined.

A more developed conceptualization of social support has been suggested by some researchers. For example, Cobb (1976) described support as information belonging to one or more of the following three dimensions:

1. Information leading the subject to believe that he or she is cared for and loved;
2. Information leading the subject to believe that he or she is esteemed and valued;
3. Information leading the subject to believe that he or she belongs to a network of communication and mutual obligation.

This definition is more precise than those of Kaplan et al. and Lin et al.; however, it seems to be limited to only emotional support, and does not consider instrumental or actual behavioral assistance.

House (1981) has provided a more improved definition in terms of clear implications for measurement. He has suggested that social support is "an interpersonal transaction involving one or more of the following: (1) emotional concern (liking, love and empathy), (2) instrumental assistance (service and goods), (3) information (about the environment), or (4) appraisal (information relevant to self-evaluation)." Even though the definition and measurement of social support have improved, research on validity and reliability of social

support indicators has not been conducted extensively (Mcfarlane et al., 1981). Thus this is one of the remaining problems associated with the concept of social support.

Meanwhile, the quality and quantity of social support are more heavily researched arenas in the study of social support. Some researchers have suggested that the quality of social support is a more important measure than the quantity of social support. The quality of social support is conceptualized as the subjective or perceived level of satisfaction with social interaction (Beckman, 1981), and as emotional bondedness to a confidant (Snow & Carpo, 1982).

In fact, in the study of social support and depression, research has provided support for the importance of the quality of social support for depressed elderly (Beckman, 1981; Dean et al., 1990; Diamond, Lund & Caserta, 1987; Galanter, 1988; Palinkas, Wingard & Barrett-Connor, 1990; Snow & Crapo, 1982). For example, the presence of an intimate confidant reduces both the incidence and severity of depression after a major life event (Gelein, 1980) and old people who do not have a confiding relationship tend to have a higher risk of depression than elderly do individuals with that relationship (Murphy, 1982).

In contrast to qualitative social support, studies of quantitative support, although it is a frequently used measure of social interaction, have shown inconsistent findings. For example, previous research suggests that interaction or frequency of contact with children does not affect aging parents' psychological well-being (Conner, Powers & Bultena, 1979; Gallo, 1982).

Visits with family make little difference in the older person's feeling of loneliness or life satisfaction. Two reasons have been suggested. First, because elderly individuals and their children have contrasting interests and values, they often do not reach agreement. Intergenerational difference and different life styles result in different life experiences; thus, frequent interaction does not contribute to the older parents' psychological well-being. The second reason is the dependency of the older parents. Older parents who feel that they are not able to provide their adult children with support because of their ill health or reduced finances have lower psychological well-being. Therefore, the frequency of interaction with their adult children does not influence positively their psychological well-being (Hochschild, 1973).

However, some studies have reported frequency of social interaction of elderly with children as being positively related to life satisfaction and morale (Harel, 1979; Morgan, 1976) and negatively related to depression (Qualls, Justice & Allen, 1980; Rotenberg & Hamel, 1988). These contrasting studies, however, note that the greater the assistance between parents and children, the more frequently they interact with each other.

Social support and depression A variety of studies have shown that decreases in social support networks impact on poor psychological and physical health (Broadhead, Kaplan & James, 1983; Cohen & Wills, 1985), that low support from available social networks (e.g. spouse,

children) has a stronger effect on an increase in depression than not having any available social networks at all (Dean et al., 1990), and that effective social support can reduce stress and increase physical and psychological well-being (Cohen & Wills, 1985; Thoits, 1982).

Then, does the presence or absence of social support influence depression directly? Beyond the direct influence, is there any indirect relation of social support on depression? Cohen and Wills (1985) proposed two models of direct and indirect effects of social support on stress-related outcomes. The indirect, or buffering, model proposes that support is related to depression primarily for persons under stressful situations. That is, social support protects persons from the negative influence of stress on depression by enhancing their adaptive coping behaviors. The other model posits that social support has a beneficial effect on depression regardless of the presence of stress. This model predicts that there is a positive relationship between social support and depression that is independent of the effect of stress.

Empirical studies suggest mixed findings as to whether the direct or the buffering effect of social support occurs. While some studies have found that social support protects persons from the negative effects of stress leading to depression (Cohen & Wills, 1985; Thoits, 1982), others have discovered that social support is associated with physical and mental health status irrespective of whether the persons suffer from stress (Aneshensel & Stone, 1982).

Russell and Cutrona's longitudinal study (1991) of the effects of social support, negative life experience, and daily hassles on

depression of elderly persons, discovered mixed results regarding both the direct and buffering effects of social support. In their study, 301 adults aged 65 or older reported that not only did deficits in social support predict the severity of depressive symptoms directly, but they also affected depression of older subjects through increasing the likelihood of experiencing daily hassles.

Although most of the research has suggested that social support as an antecedent negatively influences depression, several studies have examined social support as a consequence of depression rather than an antecedent (Lowenthal, 1965; Blazer, 1983). In his longitudinal research, Blazer (1983) found that depressed persons are more likely to improve in social support than nondepressed persons suggesting the likelihood of the improvement in social support was 262 times greater for the depressed than for the nondepressed.

Another study done by Murphy (1985) also demonstrated that depressed patients who did not recover initially who had no social support showed a significant improvement in social support when they recovered one year later. Because research has treated social support both as an antecedent and as a consequence of depression, it is difficult to determine the direction of causality of the relationship between social support and depression.

Sense of personal control

The notion of control over one's personal environment has been a basic human motivation of behavior (Alder, 1930; deCharms, 1968). Alder

(1930) has stated the need to control the personal environment as "an intrinsic necessity of life itself," and deCharms (1968) has noted that "man's primary motivation propensity is to be effective in producing changes in his environment. Man strives to be the primary locus of, causation for, or the origin of, his behavior." People strive to control their environment and continue to expand their control in their whole lives. For example, increased social and economic status may cause individuals to enlarge control over their environment as they age.

This section concerns sense of personal control. The meanings of the term "control" and its relationships with persons' psychological and physical health are described based on theoretical and empirical literature.

Definition of sense of control The term "personal control" is generally defined as the ability to manipulate some aspect of the environment (Schulz, 1976). More concretely, Arnkoff and Mahoney (1979) have described four meanings of control; skill, power, regulation, and restraint. Control as a skill is a choice of possible actions. Lefcourt (1973) stressed the importance of sense of control in relation to a choice variable and stated that "the sense of control, the illusion that one can exercise personal choice, has a definite and a positive role in sustaining life." In this case, control refers to internal abilities.

On the other hand, control as power involves control over the internal as well as the external world. This is the capacity to control

resources or reinforcements. Power is exercised not only within oneself but also outside of oneself, by, for example, other people, fate, and chance. This meaning appears to be similar to Rotter's internal vs. external control of reinforcement: the belief that outcomes are the results of one's behavior under control, and the belief that outcomes are caused by fate, luck, or powerful others, and thus beyond one's control.

Control as regulation refers to the ability to manage both skills and power, and control as restraint is the inhibition of behaviors to obtain good outcomes. Self-control often falls into this category. The term "control" includes all four concepts, and they appear to be closely related to each other.

In addition to these meanings, similarly, perceived control is the expectation of having the power to obtain desirable outcomes (Baron & Rodin, 1978). People's desire to control is another aspect of sense of control to be considered. Individuals are motivated to have a desire to control their environment; however, according to Burger and Cooper (1979), while some people have a strong desire to control events in their lives, others seem to have a consistently low desire to exercise such control.

Sense of control-related outcomes In this section, evidence that sense of control is a significant factor impacting on psychological and physical well-being is presented. Personal control is related to beneficial effects particularly among older persons, and the loss of

control in elderly individuals is associated with negative outcomes (Rodin, Timko & Harris, 1985). Research also indicates that when elderly subjects either reported having or were given greater personal control in their lives they were more likely to be positive in their psychological well-being (Langer & Rodin, 1976; Rodin & Langer, 1977; Schulz & Hanusa, 1978; Wolk & Kurtz, 1975).

Langer and Rodin (1976) assessed the effects of enhanced personal control in conjunction with personal responsibility on a group of nursing home residents. In their study of aged people 65 to 90, an intervention designed to encourage elderly nursing home residents to feel more control and responsibility for day-to-day events was used. A group of subjects was exposed to a talk with the nursing home administrator, who emphasized their responsibility for themselves. The other groups were given a talk that stressed the administrator's responsibility for them as patients. The results of the study showed that residents in the responsibility-induced group became more active and reported feeling better than the other group which was encouraged to feel that the staff would be responsible for them.

A follow-up study done by the same researchers (1977) showed long-term effects of their intervention, suggesting that residents in the responsibility-induced condition reported higher health and activity patterns, and lower mortality rates than those with no such condition. Thus, the results of the study suggested that a decline of sense of control can be slowed or even reversed with strong interventions.

A control-enhancing program designed by Slivinske and Fitch (1987) also suggested a positive assessment of increasing the sense of control for elderly persons. Participants in the study attended classes to learn to handle their environment more appropriately. The program educators taught them that the participants alone were responsible for their lives and well-being. Classes focused on stress-management, nutritional awareness, the immediate environment, self-responsibility, physical fitness and spirituality. They also took part in a conference with an interdisciplinary team of professionals. These studies shed some light on the importance of encouraging interventions that are designed to increase the sense of control in the frail elderly.

Decrease or loss of personal control is also found to have a negative impact on depression in elderly persons (Seligman, 1975), and sense of control influences lower levels of depression (Mirowsky & Ross, 1990). Seligman (1975) has reported that depressive individuals are more likely to perceive life events as being uncontrollable. Beck (1967) also found that the major problem in depression was an unrealistic tendency to blame oneself for undesirable outcomes, whereas good outcomes were believed to be the result of luck or others beyond one's own control. Blame for the bad outcomes and incapability to bring about the good outcomes tend to be ascribed to personal defects and can weaken sense of control, which may lead to depression.

Another consideration that should receive attention is the process by which sense of control moderates the negative effects of depression. Research indicates that feelings of control provide an important

psychological coping resource (Blaney, 1985). Individuals who feel they are in control of the events in their lives are coping more effectively with stressful events than those who do not feel such control. Moreover, persons with a sense of control take an active problem-solving attitude (Krause, 1987b; Mirowsky & Ross, 1990). If persons think of stressful situations as being under their own control, then they can have the confidence they need to deal with the situation to reduce its negative impact.

In contrast, those who perceive stressful situations in their lives as being uncontrollable tend to feel more helpless and do not attempt to overcome the negative experiences (Lefcourt, 1976). The literature above shows that sense of control of elderly persons can impact depression; thus, it could be expected that those who feel a sense of control over their lives would be the individuals least likely to have depression.

Social support, sense of control, and depression

As previously reviewed, social support and sense of control affect persons' depression. A noticeable correlation could be found among social support, sense of control, and depression; social support can impact depression through sense of personal control. As mentioned earlier, sense of control is a personality characteristic and functions as a coping ability against distressful situations. Social support provided by other persons is processed through the existing interpersonal characteristics of depressed individuals; therefore, first

of all, it is important to understand how socially supportive assistance is linked to the interpersonal characteristics of individuals.

Although few studies have been done on social support and sense of control, this relationship can be explained based on some clinical work. Caplan (1981) reported that even if stress deteriorated feelings of control, an effective social support network helped to increase feelings of control by providing the stressed person with appropriate help in handling the person's problem. By receiving assistance from others, the person analyzes the event, reconsiders what should be done, takes action to overcome the problem, and evaluates feedback (Caplan, 1981). Thus, as a result, the assistance can enhance feelings of competence, positive self-concept, and feelings of control over the event.

Social support, especially family support, may be the most beneficial to depressed individuals and for the elderly, for whom family is the primary source of social support. When the health of elderly persons deteriorates, a spouse is often the primary caregiver, then adult children, siblings, and other relatives in that order (Hoyt, Peters, Babchuck, Kaiser & Iijima, 1987). According to Rotter (1966), the family is a source of long and continuous reinforcement in a person's entire life, and the expectancy of reinforcement is established along with an individual's history of reinforcement from a very young age. Family interaction can provide reinforcement by satisfying affective needs through caring, love, and attention. When one feels a closer relationship to another family member, he/she is more likely to

perceive that his/her actions will have the desired consequences in dealing with that family member (Cicirelli, 1980).

This statement shows a possible relationship between sense of control and family support, and is supported by Cicirelli's study with 202 older people ranging in age from 60 to 90. A hypothesis that a more cohesive and close family would provide greater reinforcement for the elderly person's actions was found to be consistent with findings that persons who have a high internal sense of control with greater cohesiveness with other family members feel in control of events and are more likely to be motivated to cope with negative conditions.

Based on the research described above on the relationship between social support and sense of control, a possible correlation would be predicted in conjunction with depression. A study conducted by Schulz and Decker (1985) examined the relationship of the impact of social support and perceived control on psychological well-being as well as depression. One hundred middle-aged and elderly spinal-cord-injured persons were interviewed 20 years from the time the disability occurred. Respondents replied to questions concerning perceived control, social network/support, and attribution of blame. Data from the study suggested that persons who had high levels of social support were satisfied with their social contacts, felt that they had high levels of control, and reported high levels of psychological well-being and lower depression (Schulz & Decker, 1985).

Although the study reports a positive relationship among social support, levels of control and depression, as mentioned in earlier

section, some studies show that social support is not always beneficial and that there may be a negative effect on depression. Excessive social support may lead to feelings of dependence and enmeshment; thus the social support people receive from others can reduce feelings of control (Krause, 1987b). Data from a longitudinal study of older adults aged 65 and older conducted by Krause (1987b) suggest that the relationship between social support and sense of control is nonlinear. Increases in social support tend to increase feelings of control, but only up to a certain point. Beyond the point, an increase in social support is likely to decrease feelings of personal control, and thus may lead to depression.

Conceptual Model

The basic conceptual model for this study (Figure 1) is based upon the literature on depression, social support, and sense of control among the elderly. The overall hypothesis is that family support and control over life variables are predictors of the depression of the elderly parents when selected sociodemographic variables are controlled.

More specifically, the following subhypotheses are to be tested:

1. Sociodemographic variables affect family support, sense of control, and depression.
2. Family support influences sense of control and depression.
3. Sense of control affects depression.

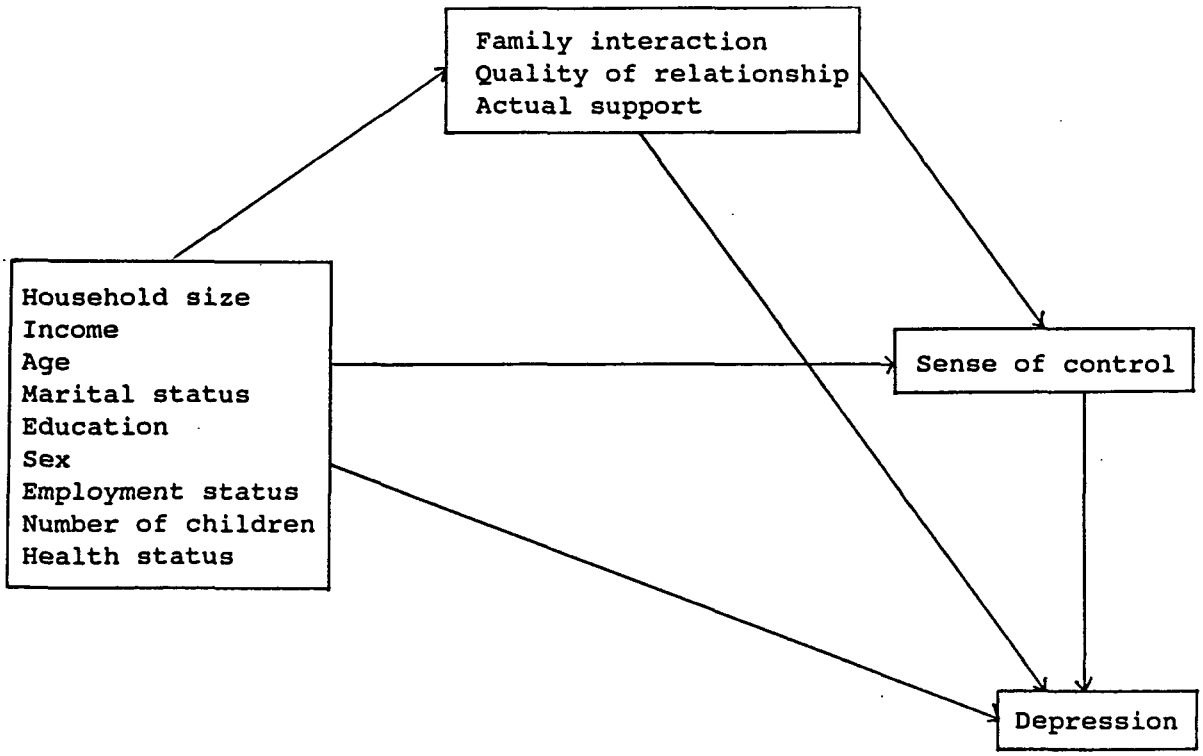


Figure 1. Conceptual model

CHAPTER 2. METHODOLOGY

Procedures

This chapter describes the methodology for the study. It includes a description of the sampling and data collection, and the definition and measurement of selected variables along with their descriptive statistics. Finally, the statistical analysis of the data is discussed.

Source of Data

The data for this study come from research on the Housing Needs and Preferences of Elderly Iowans. The study was conducted by personal interview in 1987, by researchers in the Department of Family Environment at Iowa State University. A stratified random sample was drawn, selecting respondents by age (60-74 and 75 and over) and residence (rural and urban). Rural residence was defined as living in open areas or in towns with population of less than 20,000. Urban residence was defined as living in towns or cities with populations of 20,000 or more. The original sample included 277 men and women, but because of missing data and the fact that 38 respondents had no children, the sample sizes for these analyses were 239. Data were collected from the older parents and their adult children, but for the purposes of this thesis the data utilized are from the point of view of parent.

Operationalization of Variables

Dependent variable

In this study, the major dependent variable is depression. It was measured by summing elderly parents' responses to two statements to which the parents agreed or disagreed on a 4-point scale ranging from 0, "never" to 3, "most of the time". The two statements were: "Do you feel sad or blue for no apparent reason?" and "Do these feelings keep you from doing things you'd like to do?" The alpha coefficient of reliability for the elderly sample was .57. The scale of the index ranged from zero to six. The median score was 1.00, the mean score was 1.06, and the standard deviation was 1.14.

Many elderly parents (40.2%) reported they experienced no emotional distress, and those who reported distress indicated that it was usually not enough to interrupt activities. Nevertheless, the depression levels of the parents indicate that older individuals with children experience some sort of depression at some points in time.

Independent variables

Family support. Family support is composed of three separate scales: actual support, quality of relationship, and family interaction. The items in the scales were responded to by the parents in relation to one child randomly selected from a list of all living children of the parents. If there was only one child then that child was selected. The parents were asked about the quality, quantity, and type of interaction with that selected child.

Actual support. Actual support is defined as external or instrumental assistance given by adult children to older parents. It is the assistance given by the selected child as perceived by the aging parent. It was measured by summing the responses to a series of eight questions concerned with different types of tasks. The parents responded on a 7-point scale ranging from "never" (coded 0) to "daily" (coded 6).

The eight questions were: "How often does (child) help you with bathing or getting dressed ?" "How often does (child) fix your meals ?" "How often does (child) do light tasks in your home such as cleaning or putting things away ?" "How often does (child) do heavy tasks around your home such as moving furniture, yardwork or shoveling snow ?" "How often does (child) take you to the grocery store, shopping or to the doctor ?" "How often does (child) give you advice ?" "How often does (child) give or lend you money when you need it ?" "How often does (child) help you out in an emergency such as an accident, sickness or death of someone close to you ?"

The Cronbach's alpha coefficient of reliability for the scale was .70. The minimum score was 0 and the maximum score was 30. The mean for the scale was 5.46, the median was 4, and the standard deviation was 6.01.

Quality of relationship. This variable, quality of relationship with the selected child, is defined as how much trusting or caring is shared between the elderly parent and the selected child, measured by adding together the parents' responses to four questions.

The four questions are: "How much does (child) trust you ?" "How much does (child) care about you ?" "How much do you trust (child) ?" "How much do you care about (child) ?"

The items were scored on a 5-point scale from 0, not at all, to 4, a great deal. The scale was constructed by summing the scores of the four items. The minimum score of the scale was 7 and the maximum score was 16. The alpha coefficient of reliability was .76. The mean for the scale was 15.43, the median was 16, and the standard deviation was 1.37.

Family interaction. Family interaction is defined as the frequency of interaction between parents and adult children. It was computed by summing elderly parents' responses to six statements. The six statements were: "How often do you talk on the telephone with (child) ?" "How often do you send letters and postcards to (child) ?" "How often do you receive letters and postcards from (child) ?" "How often do you see (child) face-to-face ?" "How often do you visit your children in their home ?" "How often do your children visit you in your home ?"

The parents responded on the 7-point scale ranging from 0, "never" to 7, "all children (or selected child) live at home". The minimum score of the scale was 8 and the maximum score was 45. The mean for the scale was 21.19, the median was 21, and the standard deviation was 5.69. The alpha coefficient of reliability was .64.

Sense of control. The sense of control variable was computed by three questions measuring the amount of control that the parents feel they have over their lives. One question was oriented to how much

control the respondent felt over life right now, that is, at the time the study was done. The second asked how much control the individual would like to have over life right now, and the third one asked how much control the individual expected to have over life in two years.

The possible responses for each item ranged from 1, "no control", to 7, "complete control". The responses from the three statements were scaled to form an index of control. The minimum score of the scale was 3 and the maximum score was 21. The mean for the scale was 18.97, the median was 21, and the standard deviation was 2.85. The alpha coefficient of reliability was .82.

Sociodemographic variables. Household size was measured as the number of people who were currently living with the elderly respondent. It ranged from 1 to 7, with a mean of 1.93, a median of 2, and a standard deviation of .90. About half (54.8%) of the respondents lived in two-person households. Among the rest, 30.5 percent lived alone and 14.6 percent lived with more than two people.

The total annual income has a range from -$5,815.41 to $323,812.00. The mean income was $24,307.43, and the standard deviation was $29,543.09. The median was $17,520, suggesting that a few very high incomes skew the distribution. Fewer than 30 percent of the sample had an annual income of less than $10,000.00, and an additional 30 percent had incomes between $10,000.00 and $20,000.00.

Age was assessed by the month and year of the respondent's birth. The responses were transformed into chronological age as of January 1,

1987. The ages of the respondents ranged from 60 to 93. The mean was 70.28, the standard deviation was 7.58, and the median was 68. Individuals who were aged 60-74 represented 69.5 percent of the sample, and those aged 75 and over made up the remaining 30.5 percent.

Marital status consisted of four categories: married, divorced, widowed, and never married. Over half (63.2%) were married, and the rest (36.8%) were not married. For this study, the variable was treated as a dichotomy. All married respondents were coded 1 and all respondents not currently married were coded 0. This category included those who were divorced, widowed, or never married.

Level of education was operationalized by the years of education which the respondents had completed. About 1 percent of the sample had less than elementary education, and approximately 66 percent had completed high school. An additional 19 percent of the total sample had attended college or vocational school, and 12 percent had completed a college degree. Two percent had some graduate work or had completed more than a college degree. Only 0.4 percent in the total sample had no formal education at all. The mean was 11.77, and the standard deviation was 2.84. The median was 12.

Sex of the respondent was a dichotomous variable. It was coded 0 for females and 1 for males. About 55 percent (54.8%) of respondents were female, and 45.2 percent were males.

The number of children referred to the actual number of living children, ranging from 1 child to 12 children. In the study, thirty-eight persons had no living children (13.7%). About 17 percent of

respondents (16.7%) had only one child, and those who had two or three children made up 51.5 percent of the sample. The rest (31.8%) had more than four children. The mean was 3.11, with a standard deviation of 1.9, and a median of 3.

Employment status consisted of seven categories: full-time, part-time, unemployed-looking, unemployed-not looking, homemaker, retired, and disabled. About 60 percent (56.5%) of the sample were retired. For the study, this variable was treated as a dichotomy. All currently employed respondents, including part-time or full-time workers, were coded 1; all elderly parents who were not employed were coded 0. About 24 percent (23.9%) of elderly parents were employed workers, and the remainder were not employed (76.1%).

Health status was the individual's self-assessment of health status, based on the question "How would you rate your health ?" Potential responses were 1=poor, 2=fair, 3=good, and 4=excellent. The responses had a mean of 2.86 and a standard deviation of 0.75. Over 70 percent of the elderly individuals (74%) rated their health as good to excellent, and only 5 percent rated their health as poor.

Statistical Analysis

Several analyses are used in this study. Frequency analysis provided the descriptive statistics (means, medians, and standard deviations). Along with frequency distribution, preliminary analyses of the relationships between each pair of variables were employed. Cross-classification tables and Pearson product-moment correlations were used

to determine the direction and strength of the relationships between dependent variable and each of the independent variables. Pearson correlations among the independent variables were used also to help detect the presence of multicollinearity, a necessary step in selecting variables to enter into the resulting path model.

Ordinary least squares regression was employed to estimate coefficients for the path analysis. In multiple regression analysis, the linear relationship between a dependent variable and a set of independent variables is analyzed (Agresti & Finlay, 1986). The underlying assumption is that the variables should be continuous or measured at an interval level. Nominal and ordinal categorical variables are not optimal to use in regression analysis unless they are transformed into appropriate sets of dummy variables.

Path analysis was employed to analyze the relationships among various exogenous (independent) and endogenous (dependent) variables. Path analysis is concerned with estimating the magnitude of the linkages between variables and using those estimates to provide information about the underlying causal processes. Exogenous variables are assumed to have causes outside the model, and endogenous variables are assumed to be caused inside the model (Duncan, 1966).

Path analysis yields path coefficients, which commonly are calculated in the form of standardized regression coefficients. The residual variation, or the variance unexplained in the model, provides a measure of the strength of the unknown covariate, and is calculated as

the square root of one minus the multiple correlation (Marsden, 1981), or

$$\sqrt{1-R^2}$$

In this study, a fully recursive model was hypothesized using nine exogenous and five endogenous variables in the analyses.

CHAPTER 3. RESULTS

The purpose of this chapter is to present the results and discussion of the analyses of the conceptual model. First, the degree of linear relation among the variables is shown by a Pearson product moment correlation matrix. Then, a path analysis model testing the causal relationships among the variables and the results of the data analysis are discussed.

Pearson Correlation

The Pearson product moment correlation coefficients for all pairs of variables used in the proposed model were computed. Examination of the correlation matrix for possible multicollinearity among the variables, which refers to a situation in which some or all of the independent variables are highly intercorrelated, indicates that none of the pairs of variables was highly intercorrelated (in Table A, see Appendix). The condition of multicollinearity arises when the correlations are within the range of .80 to 1.0 (Agresti & Finlay, 1986). In this study, the range of coefficients between pairs of the independent variables is from .00 to .57.

In the analysis, depression, the dependent variable, was correlated with several of the independent variables, mostly in the negative direction. Health status ($r=-.25$, $p<.01$) and sense of control over life ($r=-.21$, $p<.01$) were significantly related to depression. Those who assessed their health status as lower and sense of control as poorer were more likely to experience depressive symptoms. This conclusion is not surprising, as such findings have been already evidenced in a great

deal of literature (Aneshensel & Yokopenic, 1985; Kennedy et al., 1989; Kitchell et al., 1982; Mirowsky & Ross, 1990; Okimoto et al., 1982; Rodin & Langer, 1978; Rodin et al., 1985; Schulz & Hanusa, 1978; Seligman, 1975; Waxman & Carner, 1984).

Of three separate family support variables, the respondents' interaction with their adult children was positively associated with household size ($r=.23$, $p<.01$) and the amount of income ($r=.15$, $p<.05$). Older individuals who had frequent interaction with their children tended to have larger households and higher income. Also, family interaction was significantly correlated with the quality of the parent-child relationship ($r=.17$, $p<.05$), as well as with actual support provided by their children ($r=.41$, $p<.01$). The more frequently parents and their children interacted with each other, the better was their relationship. Furthermore, older parents with more frequent interaction received more assistance from adult children than did parents who had less frequent interaction with their children.

Quality of the relationship between older parents and their children was negatively correlated with number of living children ($r=-.13$, $p<.05$). Those who had a better relationship with their children were apt to have fewer children. Actual support was associated with levels of education ($r=-.13$, $p<.05$) and marital status ($r=-.18$, $p<.01$) of the elderly respondents. Parents who had lower levels of education and who were not married (i.e., widowed, divorced, or never married) received more assistance from their children than did parents who were married and had a higher level of education.

Another independent variable, sense of control over one's life had a significantly negative association with actual support ($r=-.19$, $p<.01$). Respondents who received more help from their children seemed to be those who felt less control over their own lives. Also, those who had a higher level of sense of control rated their health higher ($r=.19$, $p<.01$) and had fewer children ($r=-.16$, $p<.05$).

Among the sociodemographic variables, self-assessed health rating was significantly and positively associated with educational levels ($r=.21$, $p<.01$), employment status ($r=.15$, $p<.05$), and income ($r=.26$, $p<.01$), and negatively related to age ($r=-.18$, $p<.01$) and number of children ($r=-.15$, $p<.05$). People who reported their health status to be higher had higher levels of education, were employed, and had higher incomes, but were also younger and had fewer children.

Number of living children was also highly correlated with educational levels of older parents ($r=-.17$, $p<.01$). Respondents who reported having more children were those who had achieved lower levels of education. As anticipated, income for the respondents correlated significantly with employment status ($r=.13$, $p<.05$). Employed parents working full-time or part-time had higher incomes than did unemployed parents, including homemakers, retirees or the disabled. Age of the respondent ($r=-.18$, $p<.01$), marital status ($r=.19$, $p<.01$), sex ($r=.18$, $p<.01$), and levels of education ($r=.26$, $p<.01$) also had significant correlations with parents' income level. Individuals who were older and female, who were not married, and who had lower educational levels were less likely to have higher incomes.

Age was significantly and negatively correlated with household size ($r=-.36$, $p<.01$), marital status ($r=-.46$, $p<.01$), sex ($r=-.16$, $p<.05$), levels of education ($r=-.18$, $p<.01$) and employment status ($r=-.35$, $p<.01$). Respondents who were younger tended to have larger households, were married, male, received higher education, and were employed. Employment status had positive correlations with household size ($r=.18$, $p<.01$), marital status ($r=.18$, $p<.01$) and sex ($r=.28$, $p<.01$). Married men with larger households tended to be employed.

Educational level, measured by the number of years of school completed, was positively related to marital status ($r=.14$, $p<.05$). Married older parents had a higher education. Also, sex was correlated with household size ($r=.32$, $p<.01$) and with marital status ($r=.48$, $p<.01$). Males were more inclined to have larger families and to be married than were females. As anticipated, marital status was significantly associated with household size ($r=.59$, $p<.01$). Those who were married had larger households.

In summary, among the variables, only health and sense of control variable were significantly associated with experiences of depression among older parents.

Path Analysis

This section discusses results of the proposed model, using path analysis. Path analysis was conducted by a series of ordinary least squares (OLS) regressions. Following a discussion of the analysis of the full model, a reduced model is shown with all the significant paths.

The variables entered into the path analysis were chosen based on Pearson correlation results, literature, and theory. Nine variables were used as exogenous variables: health status, number of children, age, income, household size, marital status, sex, educational level, and employment status. However, after testing the full model with all nine variables, only five exogenous variables remained in the reduced model. The remaining significant exogenous variables were health status of the respondents, age, income, household size, and marital status.

The analysis followed the usual procedures of path analysis. The regression analyses were performed with hierarchical inclusion of the variables in the causal order as presented in the proposed path model. In the first regression, the three family support variables, family interaction, quality of relationship and actual support, were individually regressed on the exogeneous variables. Second, sense of control over life was regressed on the exogenous variables and family support variables. Finally, the dependent variable, depression, was regressed on the nine exogenous variables, the family support variables, and the variable assessing sense of control over life.

The reduced, model showing the standardized regression coefficients, is presented in Figure 2. The path coefficients, obtained through the OLS regression equations, were decomposed into direct and indirect effects, to investigate the strength of the causal relationships among the variables. To test the variables entered into the model, the criterion of a significant level of $p<.05$ was employed for each of the variables.

Family support

The first endogenous variable to be tested in the path model is family support, followed by family interaction, quality of relationship, and actual support. Table 1 shows the results of the regression analyses of the three family support variables on the exogenous variables. Only the exogenous variables remaining in the reduced path model are discussed. The results show that income (Beta=.21, $p<.05$) and household size (Beta=.33, $p<.05$) had positive and significant relationships with family interaction between older parents and their children. This indicates that respondents with higher incomes and larger households interacted more often with their adult children.

Of the exogeneous variables, only the age of the respondent was significantly associated with quality of relationship (Beta=.18, $p<.05$). People who were older had a better quality relationship with their adult children. The older the parents were, the more they cared for and trusted their children. The value of R^2 was less than that for the regression of family interaction on the exogeneous variables. Only 6 percent of the variance in the quality of relationship was explained by the exogenous variables. The low R^2 value suggests that a specification error exists, such as the omission of relevant variables.

In the regression of actual support on the exogenous variables, household size (Beta=.24, $p<.05$) and marital status of the respondents (Beta=-.29, $p<.05$) were significantly related to actual support received from adult children. Older parents who had larger households and who were not married received more actual assistance from their adult

Table 1. Regression analyses of family interaction, quality of relationship and actual support on the exogenous variables

Independent variables	Family interaction		Quality of relationship		Actual support	
	Beta	t	Beta	t	Beta	t
Health	-.10	-1.50	.10	1.39	-.07	-1.02
Children	-.11	-1.74	-.10	-1.50	.00	.02
Age	.05	.62	.18	2.33*	.02	.23
Income	.21	3.19*	-.03	-.43	-.02	-.24
HH. size	.33	4.25*	-.04	-.54	.24	2.98*
Marstat.	-.13	-1.43	.14	1.46	-.29	-3.13*
Sex	-.06	-.82	-.07	-.89	.01	.09
Education	-.07	-1.06	.10	1.43	-.06	-.84
Employment	.04	.56	.01	.14	-.05	-.69
Constant	3.99		9.50		1.23	
R^2	.13		.06		.09	
Adjusted R^2	.09		.02		.05	
df	9 & 237		9 & 237		9 & 237	
F	3.67*		1.64		2.35*	

*Significant at $p<.05$.

children than did parents who had smaller households and who were married. Nine percent (R^2=0.09) of the variance was explained by the exogenous variables, with a model F-value (F=2.35) significant at p <.05.

As expected, adult children provided older persons who were not married more support than they did to older parents who had a spouse. Lee and Ellithorpe (1982) also support this finding. Particularly, widowhood causes the older persons to be more physically, financially, and psychologically vulnerable. The vulnerability of the widowed parents in some areas (i.e., income and health) and the stress of bereavement are the main causes of children providing support (Lee & Ellithorpe, 1982). In this study, over one-third of the total respondents (35%) were widowed, and they made up of 82.2 percent of all unmarried subjects. Therefore, it could be said that in this study widowhood was a fairly common marital status among older people, and it is in large part this circumstance, which causes adult children to provide more supportive assistance.

The results of the regressions with family interaction and actual support as dependent variables also demonstrated the significance of household size (Beta=.33 and Beta=.24, respectively, both p<.05), suggesting that older parents who had larger households contacted their children more frequently than did parents with smaller households. Also, older persons who had larger households received more actual help from their adult children.

Sense of control over life

Sense of control over life was predicted to be related to the sociodemographic variables and to the three family support variables. Sense of control was regressed on the exogenous variables and family support variables. Table 2 presents the results of the regression analysis for these variables.

The R^2 value of .13 indicates that 13 percent of the variance in sense of control was accounted for by the relevant explanatory variables. The model F-value was 2.83, which was statistically significant at the $p<.05$ level. The results show that there were three variables that significantly predicted sense of control over life for older parents. There was a positive relationship between health status and sense of control, denoting that older persons who were healthier reported higher levels of sense of control in their lives (Beta=.17, $p<.05$). Marital status (Beta=-.22, $p<.05$) was also significantly associated with sense of control; however, surprisingly, those who were not married showed higher levels of sense of control than did married subjects.

As a matter of fact, among the predictors of sense of control, actual support (Beta=-.28, $p<.05$) was the most significant predictor of sense of control. Older parents who received more help reported lower levels of sense of control over their lives. Interestingly, the effect of quality of the relationship on sense of control was not significant (Beta=.11, $p=.08$). This finding indicates that quality of the relationship has little effect on elderly parents' feelings of control,

Table 2. Regression analysis of sense of control over life on the exogenous variables and family support variables

Independent variables	Beta	t
Health	.17	2.50*
Children	-.11	-1.65
Age	-.07	-.86
Income	-.03	-.49
Household size	.09	1.11
Marital status	-.22	-2.37*
Family interaction	.10	1.36
Quality of relationship	.11	1.74
Actual support	-.28	-3.84*
Sex	.09	1.15
Education	-.05	-.73
Employment Status	-.07	-1.03
Constant	5.20	
R^2	.13	
Adjusted R^2	.09	
df	12 & 237	
F	2.83*	

*Significant at $p<.05$.

and that parents with a lesser sense of control need more assistance. Another interpretation of this result is provided by Krause (1987b), who suggested that social support from others might lead to feelings of dependence, thus diminishing rather than increasing their feelings of control.

Depression

In the proposed model, depression was predicted to be associated with the sociodemographic variables, the family support variables, and sense of control over life. Results of the final regression, where depression was the dependent variable are presented in Table 3. In this analysis, depression was regressed on the exogenous variables, on the family support measures and on the variable assessing sense of control. The value of R^2 was .12, with a significant F-value (F=2.42), indicating that 12 percent of variance in depression was explained by the variables.

As can be seen from Table 3, health status (Beta=-.23, $p<.05$) and sense of control (Beta=-.18, $p<.05$) were significantly related to depression, showing that healthy elderly parents with higher levels of sense of control over their lives were least likely to experience depression. An interesting result, although statistically not significant (p=.06), was found for the relationship between age and depression.

Although some studies have demonstrated that older persons are more vulnerable to depression than are younger groups (Eagles & Whalley, 1985; Stenback, 1980), previous results have not consistently found

Table 3. Regression analysis of depression on the exogenous variables, family support, and sense of control over life

Independent variables	Beta	t
Health	-.23	-3.29*
Children	.02	.29
Age	-.14	-1.86
Income	.11	1.53
Household size	-.10	-1.25
Marital status	-.09	-.95
Family interaction	.09	1.20
Quality of relationship	.01	.08
Actual support	-.04	-.55
Sense of control	-.18	-2.72*
Sex	.05	.63
Education	-.01	-.13
Employment status	-.05	-.78
Constant	3.65	
R^2	.12	
Adjusted R^2	.07	
df	13 & 237	
F	2.42*	

*Significant at $p<.05$.

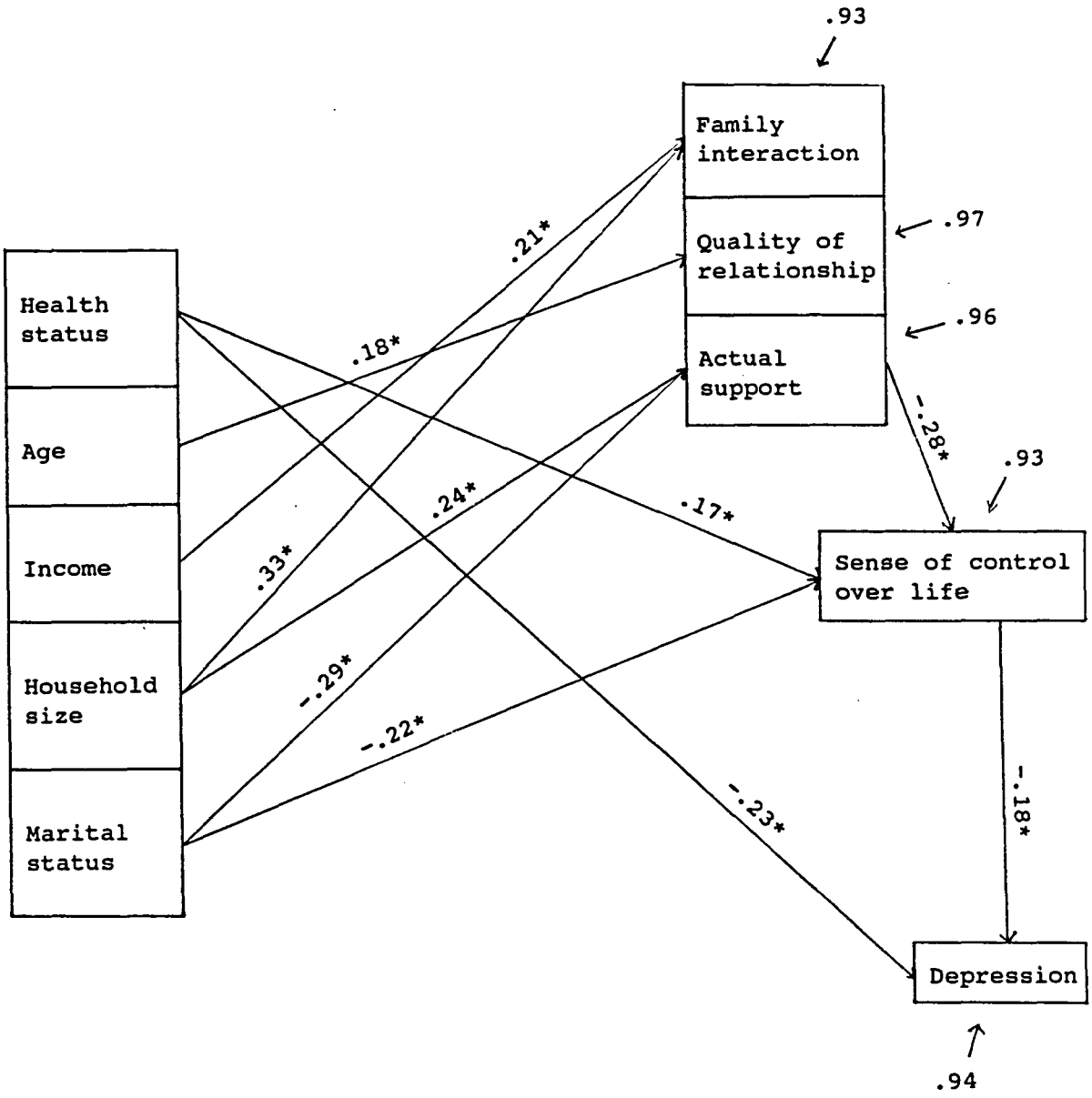
increases in depression among the elderly along with their increasing age (Gatz & Hurwicz, 1990; Lewinsohn et al., 1991). The result of this analysis also do not support this conclusion. On the contrary, younger parents exhibited insignificantly more depression than did older parents.

The results of the final regression equation also show significant contributions of health and of sense of control to depression. Previous studies support these findings. As noted in an earlier chapter, health has been consistently believed to be an important predictor of depression among the elderly. Poor health is a risk factor for developing psychological dysfunction (Kennedy et al., 1989; Rapp et al., 1988), and better health is correlated with a lower prevalence of depression (O'Hara et al., 1985).

Not only the health variable, but also sense of control, has been found to influence depression significantly. Seligman (1975) has reported that a decrease in or the loss of personal control increases depression in elderly persons. The results of the present analysis of depression are consistent with the previous findings.

Decomposition of effects

From the analyses above, a reduced path diagram can be drawn showing all the significant paths (Figure 2). In the model, some socioeconomic variables and family support variables did not significantly affect depression. Calculation of direct and indirect effects was used to examine indirect and joint effects among the



*Significant at p<.05.

Figure 2. The reduced model

variables. Table 4 and Table 5 show the results of the decomposition of these effects.

Most of significant exogenous variables in the reduced path diagram had direct effects on the endogenous variables. However, among the three family support variables, quality of relationship had a stronger indirect effect on depression through sense of control over life than its direct effect. Also, actual support had a stronger indirect effect on depression through sense of control than its direct effect. None of the exogenous variables showed significant indirect effects through the three family support variables on either sense of control (Table 4) or depression (Table 5).

On the other hand, joint effects of family support and sense of control on depression were very small; thus, in this study it can be said that the joint effects of family support and sense of control were almost zero. Results of the decomposition of effects suggest that sense of control over life was an important intervening variable, but that family support did not serve as a significant intervening variable.

It was also found that the health variable made a strong contribution directly to both sense of control and depression. It seems to make sense that those who are healthy have better feelings of control over their lives and are less likely to be depressed. This finding is consistent with previous results from research (Langer & Rodin, 1976; Schulz, 1976; Seligman, 1975). Although most of the elderly sample in this study rated their health as good or excellent (73%) and many

Table 4. Decomposition of direct and indirect effects of exogenous variables and family support on sense of control

Dependent variables	Explanatory variables	Indirect effects via				Total effects	Total indirect effects	Direct effects
		1[a]	2[b]	3[c]	4[d]			
Sense of control	Health	-.01	.01	.02	-	.19	.02	.17*
	Children	-.01	-.01	-.00	-	-.13	-.02	-.11
	Age	.01	.02	-.01	-	-.05	.02	-.07
	Income	.02	-.00	.00	-	-.01	.02	-.03
	Household size	.03	-.01	-.07	-	.05	-.04	.09
	Marital status	-.01	.02	.08	-	-.14	.08	-.22*
	1[a]	-	-	-	-	.10	-	.10
	2[b]	-	-	-	-	.11	-	.11
	3[c]	-	-	-	-	-.28	-	-.28*

[a] Family interaction.

[b] Quality of relationship.

[c] Actual support.

[d] Sense of control.

* Significant at $p<.05$.

Table 5. Decomposition of direct and indirect effects of exogenous variables, family support and sense of control on depression

Dependent variables	Explanatory variables	Indirect effects via 1[a]	2[b]	3[c]	4[d]
Depression	Health	-.01	.00	.00	-.03
	Children	-.01	-.00	-.00	.02
	Age	.00	.00	-.00	.01
	Income	.02	-.00	.00	.01
	Household size	.03	-.00	-.01	-.02
	Marital status	-.01	.00	.01	.04
	1[a]	-	-	-	-.02
	2[b]	-	-	-	-.03
	3[c]	-	-	-	.05
	4[d]	-	-	-	-

[a] Family interaction.

[b] Quality of relationship.

[c] Actual support.

[d] Sense of control.

* Significant at $p<.05$.

Table 5. (Continued)

Dependent variables	Explanatory variables	Joint effects via 1^a+4^d	Joint effects via 2^b+4^d	Joint effects via 3^c+4^d	Total effects	Total indirect effects	Direct effects
Depression	Health	.00	-.00	-.00	-.27	-.04	-.23*
	Children	.00	.00	.00	.03	.01	.02
	Age	-.00	-.00	.00	-.13	.01	-.14
	Income	-.00	.00	-.00	.13	.02	.11
	HH. size	-.01	.00	.01	-.09	.01	-.10
	Marstat.	.00	-.00	-.01	-.06	.03	-.09
	1^a	-	-	-	.07	-.02	.09
	2^b	-	-	-	-.02	-.03	.01
	3^c	-	-	-	.01	.05	-.04
	4^d	-	-	-	-.18	-	-.18*

reported no incidence of depression (40.2%), the important role of health status was strongly supported in this study.

In summary, the results of the path analysis show that health and the sense of control over life variable were the strongest predictors of depression. Interestingly, among the three family support variables,

actual support and quality of relationship did not significantly impact depression directly, but these variables contributed significantly to depression through the sense of control variable.

Among the sociodemographic variables, health was the most important predictor of sense of control as well as of depression; however, it did not significantly influence any of the three family support variables either directly or indirectly.

CHAPTER 4. SUMMARY AND CONCLUSIONS

Summary

The purpose of this research was to examine the relationships among family support, sense of control over life, and depression among a random sample of individuals aged 60 and over in the state of Iowa. The general hypothesis was that, when sociodemographic variables are controlled, family support and sense of control are significant predictors of depression.

The data for the study came from a study conducted by Iowa State University on the Housing Needs and Preferences of Elderly Iowans under a grant from the Iowa Department of Elder Affairs. The original data were collected from the older parents and their adult children, but the data used in this thesis were taken from the perspective of the parent.

Path analysis was used to validate the causal relationships among demographic variables, family support, sense of control over life, and depression for older individuals. In the first stage, the three family support variables were regressed on nine exogenous sociodemographic variables. In the second phase, sense of control was regressed on the exogenous variables and the family support variables. In the next stage of the path analysis, depression was regressed on the exogenous variables, the three family support variables, and the variable measuring sense of control. Finally, decomposition of direct and indirect effects was calculated for the significant paths.

Testing of the Hypotheses

The first hypothesis, that sociodemographic variables affected family support, sense of control, and depression, was partly supported. Family interaction was affected by income and household size; quality of relationship was influenced only by age. Actual support also was affected by household size and marital status. Among the sociodemographic variables, health and marital status were significant contributors to the variance of sense of control, and depression was influenced by health.

The second hypothesis, that family support influenced sense of control and depression, was also partly supported. While the sense of control variable was affected by actual support, there was no significant relationship between family interaction and sense of control, and also no significant relationship was found between quality of relationship and sense of control. None of the three family support variables significantly contributed to explaining the variance in levels of depression. However, the findings of the path analysis indicated that there were indirect effects between quality of relationship and depression, and between actual support and depression, through the sense of control variable.

The final hypothesis, that sense of control affected depression, was supported. A significant relationship was found between sense of control and depression. The sense of control variable was not only a good predictor of depression, but an important mediator variable in explaining depression.

Conclusions

The major conclusion that can be drawn from this study is that sense of control over life and health status were significant predictors of depression among elderly parents. Those parents who were healthy, with a high level of sense of control, were least likely to be depressed.

Sense of control over life was influenced by health status, marital status, and actual support. In particular, actual helping activities given by adult children had a strong impact on sense of control; therefore, older parents who received more support from their adult children were more likely to experience less control over their own lives.

In contrast to expectations, family support did not contribute directly to the depression that older persons experienced. However, quality of the relationship and actual support functioned, through sense of control, indirectly on depression. Among the sociodemographic variables and the three family support variables, income, and household size were related to family interaction; thus, elderly parents with greater income and larger households interacted more frequently with their children. Meanwhile, age was the only predictor of the quality of the parent-child relationship. Parents with increasing age reported greater care and trust for their children. Also, older adults who had larger households and were not married received greater assistance from their children.

Implications

The results of this study have several implications. First, among the three family support variables, quality of relationship was found insignificantly and positively to influence feelings of control, and actual support was related negatively to feelings of control. This finding suggests that it is important to examine specific types of social support. As reviewed in the literature, the social support variable has been developed over time both in conceptualization and operationalization. Researchers should consider specific and diverse types of social support in using this variable, because different dimensions of social support can lead to different interpretations.

In this study, a negative impact of actual helping behavior on depression for the aging parents is noticeable. The negative influence of actual support might reflect a strong tendency of older people to feel that they should be independent from others. Contemporary American culture promotes the value of independence for every individual, not only for the old but for the young, and even for children.

As Troll (1988) mentioned, adulthood seems to start when individuals move out of their parental home, support themselves, and make their own decisions. Since dependence of adults tends to be negatively valued, the receipt of assistance from others frequently may not be perceived as positive, and the parents might fear that they will become a burden on their children.

If the receipt of helping support from adult children frequently may not result in positive outcomes for the aged, the development of

helping techniques that allow positive outcomes might be an issue that should be handled at community levels. For instance, community supports, such as meals on wheels, transportation services, and health care services, may provide older adults who need help but do not want to accept support from their children with maximum independence and minimum dependence on their family. Therefore, developing appropriate helping techniques that enable parents and children to maintain good relationships and that allow the parents to remain independent are important tasks to work on.

Another noteworthy finding is the importance of the role of sense of control over life. As reviewed previously, some interventions to increase feelings of control for the frail elderly have been suggested. The positive results from a control-enhancing intervention in conjunction with personal choice and responsibility reported by Rodin and Langer (1977) highlights the need to develop programs for depressed elderly to improve their sense of control. Also, a control-enhancing program performed by Slivinske and Fitch (1987) showed a positive assessment of increasing the sense of control for elderly individuals.

The results of these programs showed not only an immediate bolstering of feelings of control among the elderly, but also long-term increases in control over their lives. Family educators and counselors may become involved in such programs to help depressed older persons enhance their sense of control over life. Their active involvement and assistance would encourage the development of educational programs which may mediate late-life depression for the older population.

Finally, the data from this study demonstrate the critical role of health status. Improving the health of the elderly population has been an issue of continuing significance. In fact, education has been the most frequently-used approach to health promotion. Large sums of money and research effort have been invested on educational programs for strengthening the health status of elderly persons. A notable research issue is health locus of control, which refers to beliefs in self-control over health that can change behaviors to promote health. Developing programs aimed at enhancing health locus of control is another issue for future research.

REFERENCES

Abel, B. J., & Hayslip, B., Jr. (1987). Locus of control and retirement preparation. Journal of Gerontology, 42, 165-167.

Agresti, A., & Finlay, B. (1986). Statistical methods for social sciences. (2nd ed.). San Francisco, CA: Dellen Publishing Company.

Alder, A. (1930). Individual psychology. In C. Murchinson (Ed.), Psychologies of 1930. Worcester, MA: Clark University Press.

Allgood-Merten, Lewinsohn, P. M., & Hops, H. (1990). Sex differences and adolescent depression. Journal of Abnormal Psychology, 99, 55-63.

American Psychiatric Association. (1975). A psychiatric glossary. (4th ed.). New York: Basic Books, Inc.

Aneshensel, C. A., & Yokopenic, P. A. (1985). Tests for the comparability of a causal model of depression under two conditions of interviewing. Journal of Personal Social Psychology, 49, 1337-1348.

Aneshensel, C. S., & Stone, J. D. (1982). Stress and depression. Archives of General Psychiatry, 39, 1392-1396.

Arnkoff, D. B., & Mahoney, M. J. (1979). The role of perceived control in psychopathology. In L. C. Perlmuter & R. A. Monty (Eds.), Choice and perceived control (pp. 154-177). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Baron, R., & Rodin, J. (1978). Perceived control and crowding stress. In A. Baum, J. E. Singer & S. Valins (Eds.), Advances in environmental psychology (pp. 145-190). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Baum, A., Davidson, L. M., Singer, J. E., & Street, S. W. (1987). Stress as a psychophysiological process. In A. Baum & J. E. Singer (Eds.), Handbook of psychology and health (Vol. 5, pp. 1-24). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Beck, A. T. (1976). Cognitive therapy and the emotional disorders. New York: International Universities Press.

Beckman, J. L. (1981). Effects of social interaction and children's relative inputs on older women's psychological well-being. Journal of Personality and Social Psychology, 41(6), 1075-1086.

Benassi, V. A., Sweeney, P. D., & Dufour, C. L. (1988). Is there a relation between locus of control orientation and depression? Journal of Abnormal Psychology, 97, 357-367.

Blaney, P. H. (1985). Stress and depression in adults: A critical review, In T. M. Field, P. M. McCabe, & N. Schniederman (Eds.), Stress and coping (pp. 263-283). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Blazer, D. G. (1983). Impact of late-life depression on the social network. American Journal of Psychiatry, 140, 162-166.

Blumenthal, M. (1980). Depressive illness in old age: Getting behind the mask. Geriatrics, 35(4), 34-39.

Broadhead, W. E., Kaplan, B. H. & James, S. A. (1983). The epidemiologic evidence for a relationship between social support and health. American Journal of Epidemiology, 117, 521-537.

Brody, E. M. (1981). Women in the middle and family help to older people. The Gerontologist, 21, 471-479.

Burger, J. M., & Cooper, H. M. (1979). The desirability of control. Motivation and Emotion, 3, 381-393.

Caplan, G. (1974). Support systems and community mental health. New York: Human Sciences.

Caplan, G. (1981). Mastery and stress: Psychosocial aspects. American Journal of Psychiatry, 138, 413-420.

Cicirelli, V. G. (1980). Relationship of family background variables to locus of control in the elderly. Journal of Gerontology, 35, 108-114.

Cobb, S. (1976). Social support as a moderator of life stress Psychosomatic Medicine, 38, 300-314.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and buffering hypothesis. Psychological Bulletin, 98, 310-357.

Conner, K. A., Powers, E. A., & Bultena, G. L. (1979). Social interaction and life satisfaction: An empirical assessment of late-life patterns. Journal of Gerontology, 34, 116-121.

Dean, A., Kolody, B., & Wood, P. (1990). Effects of social support from various sources on depression in elderly persons. Journal of Health and Social Behavior, 31, 148-161.

deCharms, R. (1968). Personal causation: The internal affective determinants of behavior. New York, NY: Academic Press.

Delon, M., & Wenston, S. R. (1989). An integrated theoretical guide to intervention with depressed elderly clients. Journal of Gerontological Social Work, 14, 131-146.

Diamond, M., Lund, D. A., & Caserta, M. S. (1987). The role of social support in the first two years of bereavement in an elderly sample. The Gerontologist, 27, 599-604.

Dohrenwend, B. S. (1978). Social stress and community psychology. American Journal of Community Psychology, 6, 1-15.

Duncan, O. D. (1966). Path analysis: Sociological examples. American Journal of Sociology, 72, 1-16.

Eagles, J. M., & Whalley, L. J. (1985). Aging and affective disorders: The age at first onset of affective disorders in Scotland, 1969-1978. British Journal of Psychiatry, 147, 180-187.

Epley, S. W. (1974). Reduction of the behavioral effects of aversive stimulation by the presence of companions. Psychological Bulletin, 81, 271-283.

Epstein, L. J. (1976). Symposium on age differentiation in depressive illness. Journal of Gerontology, 31, 278-282.

Esser, S. R., & Vitaliano, P. P. (1988). Depression, dementia, and social supports. International Journal of Aging and Human Development, 26, 289-301.

Fawcett, G., Stonner, D., & Zepelin, H. (1980). Locus of control, perceived constraint and morale among institutionalized aged. International Journal of Aging and Human Development, 11, 13-23.

Galanter, M. (1988). Research on social supports and mental illness. American Journal of Psychiatry, 145, 1270-1272.

Gatz, M., & Hurwicz, M. L. (1990). Are old people more depressed? Cross-sectional data on center for epidemiological studies depression scale factors. Psychology and Aging, 5, 284-290.

Gallo, F. (1982). The effects of social support networks on the health of the elderly. Social Work in Health Care, 8, 65-72.

Gelein, J. (1980). The aged American female: Relationships between social support and health. Journal of Gerontological Nursing, 6, 69-77.

Harel, Z. (1979). Discriminating between survivors and non-survivors among working class aged living in the community. The Gerontologist, 19(1), 83-89.

Herzog, A. R., & Rodgers, W. L. (1989). Age differences in memory performance and memory ratings as measured in a sample survey. Psychology and Aging, 4, 173-182.

Hochschild, R. A. (1973). The unexpected community. Englewood Cliff, NJ: Prentice-Hall.

House, J. S. (1981). Work stress and social support, Reading, MA: Addison-Wesley.

Hoyt, D. R., Peters, G. R., Babchuck, N., Kaiser, M., & Iijima, Y. (1987). Primary group support systems of the aged. Research on Aging, 9, 392-416.

Joe, V. C. (1971). Review of the internal-external control construct as a personality variable. Psychological Reports, 28, 619-640.

Johnson, J. G., & Sarason, I. G. (1978). Life stress, depression and anxiety: Internal-external control as a moderator variable. Journal of Psychosomatic Research, 22, 205-208.

Kaplan, B. H., Cassel, J. C., & Gore, S. (1977). Social support and health. Medical Care, 15, 47-58.

Kennedy, G. J., Kelman, H. R., & Thomas, C. (1990). The emergence of depressive symptoms in late life: The importance of declining health and increasing disability. Journal of Community Health, 15, 93-104.

Kennedy, G. J., Kelman, H. R., Thomas, C., Wisniencki, W., Metz, H., & Bijur, P. E. (1989). Hierarchy of characteristics associated with depressive symptoms in an urban elderly sample. American Journal of Psychiatry, 146, 220-225.

Kitchell, M. A., Barnes, R. F., Veith, R. C., Okimoto, J. T., & Raskind, M. A. (1982). Screening for depression in hospitalized geriatric medical patients. Journal of American Geriatrics Society, 30, 174-177.

Klerman, L. G., & Weissman, M. M. (1989). Increasing rates of depression. JAMA, 261(15), 2229-2235.

Kobasa, S. (1979). Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personal and Social Psychology, 37, 1-11.

Krause, N. (1987a). Chronic strain, locus of control, and distress in older adults. Psychology and Aging, 2, 375-382.

Krause, N. (1987b). Understanding the stress process: Linking social support with locus of control beliefs. Journal of Gerontology, 42, 589-593.

Lachman, M. E. (1986). Personal control in later life: Stability, change and cognitive correlates. In M. M. Baltes & P. B. Baltes (Eds.), The psychology of control and aging (pp. 207-236). Hillsdale, NJ: Lawrence Erlbaum Associates.

Langer, E. J., & Rodin, J. (1976). The effects of choice and enhanced personal responsibility for the aged: A field experiment in an institutional setting. Journal of Personality and Social Psychology, 34, 191-198.

Lee, G. R., & Ellithorpe, E. (1982). Intergenerational exchange and subjective well-being among the elderly. Journal of Marriage and the Family, 28, 217-224.

Lefcourt, H. (1973). The function of the illusion of control and freedom. American Psychologist, 28, 417-425.

Lefcourt, H. (1976). Locus of control: Current trends in theory and research. Hillside, NJ: Lawrence Erlbaum Associates, Inc.

Lefcourt, H. M., Martin, R. A., & Saleh, W. E. (1984). Locus of control and social support: Interactive moderators of stress. Journal of Personality Sociological Psychology, 47, 378-389.

Lewinsohn, P. M., Rhode, P., Fisher, S. A., & Seeley, J. R. (1991). Age and depression: Unique and shared effects. Psychology and Aging, 6, 247-260.

Lin, N., Dean, A., & Ensel, W. (1981). Social support scales: A methodological note. Schizophrenia Bulletin, 7(1), 73-89.

Lin, N., Dean, A., & Ensel, W. (1986). Social support, life events, and depression. New York: Academic Press.

Lowenthal, M. F. (1965). Antecedents of isolation and mental illness in old age. Archives of General Psychiatry, 12, 245-254.

Marsden, A. P. (1981). Linear models in social research. Beverly Hills: Sage Publications.

Mcfarlane, A. H., Neale, K. A., Norman, G. R., Roy, R. G., & Streiner, D. L. (1981). Methodological issues in developing a scale to measure social support. Schizophrenia Bulletin, 7(1), 90-100.

Mercier, J. M., & Powers, E. A. (1984). The family and friends of rural aged as a natural support system. Journal of Community Psychology, 12, 334-346.

Mirowsky, J., & Ross, C. E. (1990). Control or defense? Depression and the sense of control over good and bad outcomes. Journal of Health and Social Behavior, 31, 71-86.

Molinari, V., & Niederehe, G. (1984). Locus of control, depression and anxiety in young and old adults: A comparison study. International Journal of Aging and Human Development, 20, 41-52.

Morgan, L. A. (1976). A reexamination of widowhood and morale. Journal of Gerontology, 31, 687-695.

Morris, J. N., Wolf, R. S., & Klerman, L. V. (1975). Common themes among morale and depression scales. Journal of Gerontology, 30, 209-215.

Murphy, E. (1982). Social origins of depression in old age. British Journal of Psychiatry, 141, 135-142.

Murphy, E. (1985). The impact of depression in old age on close social relationships. American Journal of Psychiatry, 142, 323-327.

Nehrke, M. F., Hulicka, I. M., & Morganti, J. B. (1980). Age differences in life satisfaction, locus of control, and self-concept. International Journal of Aging and Human Development, 11, 25-33.

O'Hara, M. W., Kohout, F. J., & Wallace, R. B. (1985). Depression among the rural elderly. Journal of Nervous Mental Disease, 173, 582-589.

Okimoto, J. T., Barnes, R. F., Veith, R. C., Raskind, M. A., Inui, T. S., & Carter, W. B. (1982). Screening for depression in geriatric medical patients. American Journal of Psychiatry, 139, 799-802.

Palinkas, L. A., Wingard, D. L., & Barrett-Connor, E. (1990). The biocultural context of social networks and depression among the elderly. Social Science Medicine, 30, 441-447.

Phifer, J., & Murrell, S. A. G. (1986). Etiologic factors in the onset of depressive symptoms in older adults. Journal of Abnormal Psychology, 95, 282-291.

Qualls, E. P., Justice, B., & Allen, E. R. (1980). Isolation and psychosocial functioning. Psychological Reports, 46(1), 279-285.

Radloff, S. L. (1977). The CES-D scale: A self-reported depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Rapp, S. R., Parisi, S. A., & Walsh, D. A. (1988). Psychological dysfunction and physical health among elderly medical inpatients. Journal of Consulting and Psychology, 56, 851-855.

Rodin, J., & Langer, E. J. (1977). Long-term effects of a control-relevant intervention with the institutionalized aged. Journal of Personality and Social Psychology, 35, 897-902.

Rodin, J., Timko, C., & Harris, S. (1985). The construct of control: Biological and psychosocial correlates. In M. P. Lawton & G. L. Maddox (Eds.), Annual review of gerontology and geriatrics, (Vol. 5). New York: Springer.

Rotenberg, K. J., & Hamel, J. (1988). Social interaction and depression in elderly individuals. International Journal of Aging and Human Development, 27, 305-318.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80, 1-28.

Russell, D. W., & Cutrona, C. E. (1991). Social support, stress, and depressive symptoms among the elderly: Test of a process model. Psychology and Aging, 6, 190-201.

Ryckman, R. M., & Malikiosi, M. X. (1975). Relationship between locus of control and chronological age. Psychological Report, 36, 655-658.

Sandler, I. N., & Lakey, B. (1982). Locus of control as a stress moderator: The role of control perceptions and social support. American Journal of Community Psychology, 10, 65-80.

Schulz, R. (1976). The effects of control and predictability on the psychological physical well-being of the institutionalized aged. Journal of Personality and Social Psychology, 33, 563-573.

Schulz, R., & Hanusa, B. H. (1978). Long-term effects of control and predictability on enhancing interventions: Findings and ethical issues. Journal of Personality and Social Psychology, 36, 1194-1201.

Schulz, R., & Decker, S. (1985). Long-term adjustment to physical disability: The role of social support, perceived control, and self-blame. Journal of Personality and Social Psychology, 48, 1162-1172.

Seligman, M. (1975). Helplessness: On depression, development, and death. San Francisco, CA: Freeman.

Seligman, M. (1989). Research in clinical psychology: Why is there so much depression today. In I. S. Cohen (Ed.), G. Stanley hall lectures (Vol. 9, pp. 75-96). Washington, DC: American Psychological Association.

Shekelle, R. B., Raynor, W. J., & Ostfeld, A. M. (1981). Psychological depression and the 17-year risk of cancer. Psychosomatic Medicine, 43, 117-125.

Siegler, I. C., & Gatz, M. (1985). Age patterns in locus of control. In E. Palmore, J. Nowlin, E. Busse, I. Siegler, & G. Maddox (Eds.), Normal aging III. Durham, NC: Duke University Press.

Slvinske, R. L., & Fitch, L. V. (1987). The effect of control enhancing interventions on the well-being of elderly individuals living in retirement communities. The Gerontologist, 27, 176-181.

Snow, R., & Carpo, L. (1982). Emotional bondedness, subjective well-being, and health in elderly medical patients. Journal of Gerontology, 37(5), 609-615.

Stenback, A. (1980). Depression and suicidal behavior in old age. In J. E. Birren & R. B. Sloane (Eds.), Handbook of mental health and aging (pp. 616-652). Englewood Cliffs, NJ: Prentice-Hall.

Thoits, P. A. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. Journal of Health and Social Behavior, 23, 145-159.

Thompson, W. L., Gong, V., Haskin, E., & Gallagher, D. (1987). Assessment of depression and dementia during the late years. In M. P. Lawtor & G. L. Maddox (Eds.), Annual review of gerontology and geriatrics (Vol. 7, pp. 295-333). Washington, DC: American Psychological Association.

Troll, L. E. (1988). New thoughts on old families. The Gerontologist, 28(5), 586-591.

Waxman, H. M., & Carner, E. A. (1984). Physicians recognition, diagnosis and treatment of mental disorders in elderly medical patients. The Gerontologist, 24, 593-597.

Wolk, S., & Kurtz, J. (1975). Positive adjustment and involvement during aging and expectancy for internal control. Journal of Consulting and Clinical Psychology, 43, 173-178.

ACKNOWLEDGEMENTS

I would like to express more than appreciation to Dr. Joyce Mercier, my advisor, for her support, patience and guidance throughout my graduate studies.

My appreciation is extended to Dr. Craig Allen and Dr. Pat Keith, the members of my committee, for their interest and help during this study.

I also wish to thank Dr. Mack Shelley for his kindness and professional guidance to analyze the data of the study.

Special thanks are expressed to my husband, Inmok, who has believed that I can do what I sometimes think I cannot do, for his support, encouragement, love and prayer during my school years. My two sons also deserve to have my thanks for being so patient with busy mom everyday during the preparation of this manuscript.

Finally, I thank God for encouraging and guiding me until finishing this study.

APPENDIX

Table A. Pearson product-moment correlations of all variables

		1	2	3	4	5	6	7
1	Household size	1						
2	Marital status	.59**	1					
3	Sex	.32**	.48**	1				
4	Education	-.02	.14*	.07	1			
5	Employment status	.18**	.18**	.28**	.08	1		
6	Age	-.36**	-.46**	-.16*	-.18**	-.35**	1	
7	Income	.10	.19**	.18**	.26**	.13*	-.18**	1
8	Health status	.10	.10	.03	.21**	.15*	-.18**	.26**
9	Number of children	.11	.11	.12	-.17**	.06	-.04	-.08
10	Family interaction	.23**	.03	.03	-.07	.02	-.0	.15*
11	Quality of relationship	-.06	.00	-.05	.11	-.05	.12	.01
12	Actual support	.05	-.18**	-.08	-.13*	-.08	.11	-.09
13	Sense of control over life	.00	-.07	-.00	.02	-.02	-.01	.03
14	Depression	-.07	-.04	.01	-.02	-.04	-.04	.05

**Significant at p<.01.

*Significant at p<.05.

8	9	10	11	12	13	14
1						
-.15*	1					
-.04	-.10	1				
.10	-.13*	.17*	1			
-.10	.01	.41**	.12	1		
.19**	-.16*	.02	.11	-.19**	1	
-.25**	.05	.10	-.04	.04	-.21**	1