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The Relationship of Gender and Marital Status to Depression and Personality and Demographic Variables Among the Well Elderly

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THE RELATIONSHIP OF GENDER AND
MARITAL STATUS TO DEPRESSION
AND PERSONALITY AND DEMOGRAPHIC VARIABLES
AMONG THE WELL ELDERLY

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A Dissertation
Submitted to the Graduate Faculty
of the
University of North Dakota
in partial fulfillment of the requirements
for the degree of
DOCTOR OF PHILOSOPHY

Grand Forks, North Dakota
December
1991



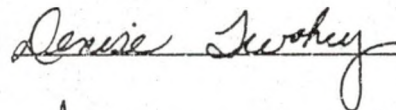
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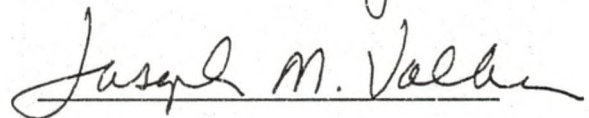
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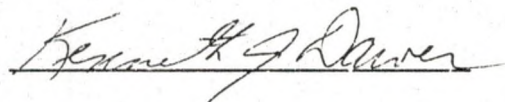
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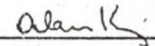


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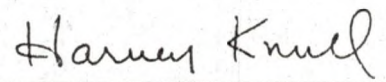








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Dean of the Graduate School

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Department: Department of Counseling

Degree: Doctor of Philosophy

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Signature Virginia Schulz

Date October 30, 1991

I dedicate this work to my family:

To my husband, Clair, for his constant love and support, even the sacrifice of his own career for a time;

To my children, Jon Stenerson, Nancy Gonzales, and Kristin Johnson; and grandchildren, Kayla, Jeremiah, and Beatrix, who understood when Mom and Grandma could not be available;
and

To the memory of my parents, Andrew Valencourt Van Orsdale and Edith Delf Van Orsdale, who always believed that I could do whatever I set out to do.

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ACKNOWLEDGMENTS

As with any achievement, the help of many people is necessary.

My grateful thanks go to Dr. Eldon Gade, who has shepherded me through a Master's thesis, as well as the dissertation; I quite literally could not have done it without him. Thanks also go to the other members of my committee: Dr. Joe Volker, for this assignment, as well as for writing lots of letters of recommendation; Dr. Denise Twohey, for her feminist perspective, as well as for being a great role model; Dr. Kenneth Dawes, for taking his valuable time to contribute his knowledge and experience to this committee; and to Dr. Alan King, for being willing to fill in for Dr. Bill Beckwith, who for some reason decided that life in Florida with his wife sounded better than life in North Dakota without her!

Thanks also go to colleagues at the Texas A&M Student Counseling Service; I have appreciated their understanding and encouragement. I especially wish to acknowledge the support of my fellow interns, Scott Parker, Noel Rather, and Anna Satterfield-Jenkins, and that of Drs. Sue Lucas and Maggie Olona, who were there to pick up the pieces when I felt like coming unglued. Finally, thanks to Drs. Robert Carter and Ted Stachowiak, who did all they could to make my LEWP do the job, to Dr. Kerry Hope, who gave information, advice, and encouragement, and to Roberta and Erica, whose days at the keyboard finally brought this to completion.

ABSTRACT

The purpose of this study was to examine the relationship of gender and marital status to depression and personality and demographic variables among the well elderly.

There were three research questions: (1) By gender, what is the relationship of the inventory scales scores and the demographic variables to the CES-D Depression Scale? (2) Are there significant gender differences on the inventory scales scores and on the demographic variables? (3) Is there a gender by marital status interaction on the CES-D Depression Scale scores and on the inventory scales scores?

Subjects were 214 females and 103 males ages 55 to over 80. They were administered a questionnaire consisting of demographic information and the following instruments: Center for Epidemiologic Studies-Depression Scale, UCLA Loneliness Scale, Rosenberg Self-Esteem Scale, Schedule of Recent Events, and the Multidimensional Scale of Perceived Social Support.

Results of the study showed no significant difference between men and women on the depression scale scores, but men were significantly lonelier than women. Those variables most highly correlated with the CES-D scale for women were the UCLA Loneliness Scale, the Rosenberg Self-Esteem Scale, and total Medication taken. For males, the UCLA Loneliness Scale, the Rosenberg Self-Esteem Scale and perceived Health status correlated most highly with the CES-D scale.

There were no significant marital status differences on any of the variables and no significant gender by marital status interaction.

It was concluded that there are gender differences in the experience of depression. It may be that males perceive poor health or retirement as more emotionally impactful than do women.

CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Introduction

The blues. The blahs. Walking in cement. Feeling down. These are but a few of the ways in which depression, one of the most ubiquitous of human afflictions, is described. There is basic agreement upon the prevalence of depression. At any one time, 20% of the adult population will have significant depressive symptoms (Weissman & Meyers, 1981). The DSM-III-R (APA, 1987) reported that in studies of major depression in the United States and Europe, 9% to 26% of females and 5% to 12% of males in the adult population have had the disorder. Women appear to be 1.6 to 2 times more likely to experience depression than men (Weissman & Klerman, 1977; Coyne, 1986a). In addition, there is some indication that age of onset is declining to about 20 years of age (Holden, 1986). The literature is not quite as clear in assessing the prevalence of depression in the elderly. The incidence may be 5% (Weissman & Myers, 1978) or nearly 30% (Blazer, Hughes, & George, 1987); it all seems to depend on how the depressive criteria are defined. With some equivocation, then, the data on the incidence of depression in the elderly do not differ greatly from that of the general adult population.

In spite of the general agreement upon the existence and prevalence of depression, there is disagreement as to causality and even to definition of the phenomenon (Coyne, 1986b). Some questions which research has attempted to answer are: Is depression a disease, a mood disturbance, or a personality disorder? Is it a syndrome? Is there a basic difference between "normal" depressed feelings and a condition sufficiently painful to warrant medical intervention? Is depression the result of biochemical disturbances in the brain? Might stress result in biochemical changes which in turn produce feelings of sadness, emptiness, discouragement, and loneliness? The answers to these questions depend in large part upon the theoretical orientation of the respondent. Those who adhere to perspectives other than biochemical "...have generally assumed a continuum between a normal depressed mood and clinical depression..." and regard any observed biochemical differences as being irrelevant "...to the psychological and social processes in which they are most interested" (Coyne, 1986a, p. 4).

The problems of description and diagnosis mentioned above are also present when the issue is depression in the elderly. When one examines the literature concerning late life depression, one can find support for almost any hypothesis which might be proposed, and gaps in the literature are apparent. There are few studies which compare depressive symptomatology in old age with that of the earlier adult years, and there are even fewer which address the comparison of first onset of depression at old age with the elderly who

have a history of depressive symptomatology (Zarit, 1980). The literature which does exist concerning depression in the elderly is often contradictory. Butler and Lewis (1977), for example, claim that older people have excessive feelings of guilt; Pfeiffer and Busse (1973) note that guilt is often not present in depression in the elderly.

The question of how and why men and women differ in terms of psychological distress is an interesting one. Much of the research into gender differences, however, has focused on one gender at a time (Cook, 1990). This method of analysis has produced some "essential clarity," although "it may also make it difficult to compare how the sexes are different (or alike) in certain respects" (Cook, 1990, p. 371).

The literature review did not yield any true models of depression in the elderly which might have been applied to this sample. The purpose of this study, therefore, was to examine, explore, and describe gender differences in depression and in selected correlates of depression as they are assessed in a sample of the rural well elderly. The variables were chosen to reflect three major areas of concern: (1) **physical concerns** as measured by health status and use of medications; (2) **economic concerns** as measured by income, employment, and education; and (3) **personal/social concerns** as measured by loneliness, self-esteem, social support, personal losses, marital status, relationship with children, and life stressors. The study also assessed the relationship of marital status to depression and the selected correlates, as well

as examined the relationship of the gender and marital status interaction to those variables.

This chapter will first address general depressive symptomatology and several theoretical approaches to understanding depression. Second, this chapter will address depression in the elderly, focusing upon the scope of the problem and the problem of diagnosis. Finally, this chapter will discuss the correlates of depression chosen for inclusion in this study.

Review of the Literature

The review of the literature has been organized into four major subsections: (1) symptoms of depression, (2) theories of depression, (3) depression in the elderly, and (4) correlates of depression in the elderly. Although a quantity of relevant literature was found, none was found which addressed the subject of this study in precisely the same way. In particular, no other study was found which addressed the question of the relationship of the gender and marital status interaction to depression in this population.

Symptoms of Depression

Although there are differences in classifying subtypes of depression and in categorizing symptoms, there appears to be general agreement that depressive symptomatology includes sad affect, painful thinking, physical concomitants, and some manifestation of anxiety (APA, 1987; Beck, Rush, Shaw, and Emery, 1979; Craighead, 1980; Craighead, 1981).

Lewinsohn, Biglan, and Zeiss (1976) have summarized the literature on depressive symptomology and have presented five categories of symptoms:

- (1) **dysphoria** (feelings of sadness, apathy, and boredom);
- (2) **behavioral deficits** (decreased time spent with others in social contact or general decrease in activities of all kinds);
- (3) **behavioral excesses** (complaints about life, expressed feelings of guilt, suicidal behavior);
- (4) **somatic symptoms** (headaches, sleep disturbance, fatigue, gastrointestinal problems, loss of libido); and
- (5) **cognitive manifestations** (low self-esteem, negative expectations, self-blame or self-criticism, helplessness, and powerlessness).

Given this agreement as to what depression produces, one might expect closer agreement on causality or antecedent conditions, but that is not so. A brief examination of the basic tenets of various theories as they pertain to depression will make this evident.

Theories of Depression

Psychodynamic Approaches

Historically, Hippocrates (c. 460 to c. 375 B.C.) was perhaps the first to recognize and attempt to explain the distress we call depression. He referred to it as melancholia, a temperament caused by an excess of black bile (Dorland, 1988). He, of course, knew little of human physiology and less of psychology, but instead based his explanations upon his observations of the

"humors" or body fluids. The notion of melancholia persisted until the DSM-III-R (APA, 1987), when hypochondriacal melancholia and involuntal melancholia were subsumed under the category of major depression.

The psychodynamic approach developed in an era of little empirical research data. Instead, it was a time dramatic theoretical formulation and rich clinical studies, which were basically observational in nature (Mendelson, 1960). Certainly, this tradition has acquired diversity, since it encompasses a significant time period (Freud, c. 1896, through Lewin and others in the 1950s). Abraham (1911) is credited with being the first to contrast melancholia with normal grief reaction and thus begin the conceptualization of depression (Haynal, 1985). For Abraham (1911), it was the presence of anger, hatred, or, in psychoanalytic terms, unconscious hostility, that distinguished normal grief from abnormal depression (Haynal, 1985).

Freud's (1917) understanding of depression is described by the phrase "the shadow of the object fell upon the ego" (p. 54). It was his belief that when a strong fixation to the loved object existed, and that relationship was shattered, the inability to displace the libido to a new object resulted in a withdrawal of the libido into the ego. The ego thus formed an identification with the lost object, and "object-loss was transformed into an ego-loss and the conflict between the ego and the loved person into a cleavage between the critical activity of the ego and the ego as altered by identification" (Freud, 1917, p. 54). Hostility that cannot be directly expressed to the loved (lost)

object then results in loss of self-esteem and "punishing self-criticism" (Coyne, 1986c, p. 26). Freud's (1917) and Abraham's (1911) theories have, of course, been modified in the ensuing years. Bibring (1953), for example, added the notion of helplessness to the formula. Cohen and Syme (1985) emphasized the manner in which interpersonal relationships are formed, rather than the more intrapsychic factors, as the significant determinant of the depressive phenomenon.

This modern trend toward an interpersonal notion of psychodynamics has contributed a rich dimension to the more traditional intrapersonal concepts of its founders. In addition, the ongoing attempt to create consistent, responsible qualitative research methods may prove most valuable to this theoretical perspective. At any rate, it was in the attempt to empirically examine the psychodynamic hypotheses of depressed persons' dreams that Aaron T. Beck began to formulate his cognitive model of depression.

Cognitive/Behavioral Approaches

Coyne (1986) named the two most influential behavioral formulations of depression as those of Lewinsohn (1986) and Seligman and colleagues (Miller, Rosellini, & Seligman 1986). This is not to deny the work of Beck, who has "revitalized the psychological study of depression" (Coyne, 1986, p. 146).

Lewinsohn (1986) posited a model of depression in which a lowered response rate, or reduced rate of behavior, was seen not only as a function

of specific rewards available to it, but also as a function of the overall amount of positive reinforcement available for any response. Lewinsohn and Takington (1979) also suggested a relationship between the number of aversive events in a person's life and depression. Seligman (1975) has attempted to provide an analogue for depression in order to achieve greater precision in definition and delineation, i.e., the learned helplessness model. The term "learned helplessness" was used first in lab experiments with dogs, in which they were exposed to shocks from which they could not escape (Overmier & Seligman, 1967). After repeated trials, the dogs sat passively as the shock was administered. Later, when provided with a way of escape from the shock, they tended to ignore the opportunity and to continue to take the shock passively. The analogue to depression suggests that the person exposed to uncontrollable aversive circumstances or events may fail to initiate appropriate, effective responses because he or she has learned that such responses have been ineffective in the past.

The learned helplessness model evoked a large body of research and substantial controversy (Buchwald, Coyne, & Cole, 1978). The result led to a reformulation of the model in which uncontrollability was not seen as sufficient for helplessness to develop. Rather, the person must come to expect that events will be uncontrollable in the future, an expectation mediated by higher cognitive processes (Abramson, Seligman, & Teasdale, 1986). The implication that persons make attributions as to the cause of their depression led to

quantities of research concerning depression and attributional style (e.g., Klein, Fencil-Morse, & Seligman, 1976; Patrick & Moore, 1988; Rizley, 1978). Abramson, Garber, Edwards, and Seligman (1978) hypothesized that coping ability could be seen to vary along three dimensions of attribution: internal vs. external; stable vs. unstable; and global vs. situation specific. Abramson, Garber, Edwards, and Seligman (1978) predicted that the depressed person would be inclined to exhibit internal, stable, and global attributions for negative events. In other words, persons who are likely to expect that there is some internal cause (e.g., stupidity, worthlessness, etc.) for a negative event, a cause which is unlikely to change and which generalizes to a variety of situations, will be more prone to depression. Research is mixed in its support of this hypothesis (Golin, Sweeny, & Schaeffer, 1981; Gong-Guy & Hammen, 1980; Seligman, Abramson, Semmel, & von Baeyer, 1979).

To the average layperson, as well as to many clinicians, Aaron T. Beck may be the name most synonymous with the study of depression. He is known for his theory of cognitive distortion (Beck, 1963), for his cognitive therapy of depression (Beck, Rush, Shaw, & Emery, 1979), as well as for the Beck Depression Inventory (BDI) for use in the diagnosis of depression (Beck, Ward, Mendelson, Mack, & Erbaugh, 1961). While the original learned helplessness model suggested that lack of control was the key factor in depression, Beck's model suggested that depressed persons blame themselves excessively. The reformulated learned helplessness theory and

Beck's cognitive theory are seen as complementary rather than competing theories (Coyne & Gotlib, 1983).

While Coyne and Gotlib (1983) concluded that depressed persons do respond in negative, pessimistic, and self-deprecating ways, not only to laboratory situations, but also to life situations, they did not find depressed-nondepressed differences on cognitive measures as strong as either model might predict. What have been found are correlations; it remains difficult to determine causality or to "identify cognitive markers for depression that are not state dependent" (Coyne, 1986c, p. 147). It will be a challenge for researchers (and perhaps for statisticians) to find that causal relationship, if, indeed, it exists.

Interpersonal and Social Approaches

The contribution of the interpersonal/social approaches has been to acknowledge as significant the social context in which depression occurs. Work on depression within the marital and family context has revealed the following: a self-perpetuating spiral of conflict avoidance, no problem solution, withdrawal and conflict avoidance (Kahn, Coyne, & Margolin, as cited in Coyne, 1985); and family members feel more hostility toward depressed than non-depressed members, but they may inhibit the expression of those feelings (Biglan et al., as cited in Coyne, 1985).

The phenomenon described above is generally descriptive of all social systems within which the depressed person finds himself or herself (Coyne,

1986b). He suggests that whenever the depressed person seeks feedback as to why he or she is being rejected, the response is likely to be denial or angry defense. The effort, then, to change the system becomes instead "system-maintaining" (Coyne, 1986b, p. 322).

Billings and Moos (1986) have proposed an integrative framework of depression in which personal and environmental resources affect the occurrence of environmental stressors, determine the nature of the coping mechanisms chosen to deal with the stressors, and subsequently influence the adaptive outcome of the stressful event. Stressful life circumstances may include specific events (e.g., divorce); "chronic life strains" (e.g., marital discord), and medical conditions (e.g., cancer) (Billings & Moos, 1986, p. 332).

In addition to life stressors as indicated above, there are what some researchers have termed "hassles" which may serve as stressors and which may influence the adaptive outcome (Holahan & Holahan, 1987; Lazarus & Cohen, 1977). These hassles are those daily irritations and frustrations which confront all people in varying degrees. One study found that indices of daily hassles were better predictors of both present and subsequent depression than were indices of major life events (Kanner, Coyne, Schaefer, & Lazarus, 1981). The daily hassle index used in that study included such items as being bothered by noise, having too many things to do, and problems with yardwork.

Biomedical Approaches

In discussing biomedical explanations for depression, one is struck by the newness of the perspective. One cannot quote "classic" statements such as those by Freud, Seligman, or Beck. In addition, the nature of medical technology makes research of even 20 years ago obsolete.

Here, too, as with other attempts to define, explain, and analyze depression, one is faced with the difficulty of cause and effect. It is not enough to know that a particular neurotransmitter is seen more frequently in a depressed than a non-depressed person; one must ask what that presence means. In addition, "One does not necessarily discover causes of a disease by studying the effects of biochemicals that can 'cure' it" (McNeal & Cimboric, 1986, p. 372).

In twin studies, Allen (1976) reported a unipolar monozygotic concordance rate of 40%, which supports the notion that genetics may play an important role in depression. In general, two hypotheses concerning modes of transmission of genetic involvement have emerged: (1) an X-linked dominant gene inheritance, and (2) polygenic inheritance, although the data is in only for bipolar disorders (Depue & Monroe, 1978). Depue and Monroe (1978) claim that all computational studies of polygenic transmission are flawed because they do not first demonstrate the validity of the transmission assumption.

Of more interest, perhaps, are those studies concerned with the use of antidepressants or other chemicals for the treatment of depression. There are numerous studies which report both therapeutic effect (e.g., Mendels, 1975; Noyes, Dempsey, Blum, & Cavanaugh, 1974) and prophylactic effect of lithium on depression (e.g., Baastrup, Poulson, Schou, Thomsen, & Amdisen, 1970; Fieve, Kumbaraci, & Dunner, 1976). Although the literature in general seems to support the use of lithium as an effective treatment of bipolar depression, there is also some evidence that lithium may be effective in treating unipolar depression (see, for example, Depue & Monroe, 1978, and Goodwin, Murphy, Dunner, & Bunney, 1972). Questions do remain as to why it does not work with all depressives. Clearly, there may be complex factors at work.

Studies documenting the therapeutic effectiveness of tricyclic antidepressants are numerous (e.g., Bielski & Friedel, 1976). It is true for these drugs, as it is for lithium, however, that not all depressives respond to the treatment (Klein & Davis, 1969). It is also true, however, that these drugs are responsible for the return of many hospitalized depressives to a more or less normal life.

While it is not within the scope of this paper to deal with the biomedical theories of depression in depth, it does seem appropriate to acknowledge that this area of research appears to hold much promise for the treatment of depression. Whether it also holds the promise of causal explanation remains to be seen.

Dichotomous Subgroups

There has been some tendency toward the use of neurotic-psychotic and reactive-endogenous as dichotomous subgroups of depression. This arose from the dualist approach to explanations of human behavior. In the case of the neurotic-psychotic label, the differences were based upon severity, disruptiveness, and chronicity. On the reactive-endogenous dimension, the differences were etiological, symptomatic, and responsiveness to treatment. A more unitary approach to the depressive phenomenon would imply that it is a syndrome with a common set of characteristics and etiological pattern which would respond to a particular treatment program.

Perhaps splitting the difference between these two opposing views are the cognitive-behavioralists, who maintain a pluralist position. Lewinsohn (1986), Beck (1963), and Seligman (1975), while emphasizing different causative factors, maintain that depression is a multidimensional phenomenon. This implies complexity in assessment as well as in treatment. The DSM-III-R (APA, 1987) also seems to take a pluralist position, offering several different classifications of depression depending upon symptomatology, etiology, severity, and chronicity.

It has been suggested that the use of the dichotomous subgroups be abandoned, since they are not used in any systematic, meaningful way in the literature (Lewis, 1971; Mendels, 1965). The question of whether or not there are two distinct categories has resulted in equivocal findings (e.g., Foulds,

1973; Kiloh & Garside, 1963). The issue does not appear to be a particularly salient one in the research of the past ten years, however.

Depression in the Elderly

Scope of the Problem

Although there is general agreement among many researchers that depression is frequently found in the elderly, there is an enormous problem evident in the research: there is "...general lack of clear criteria for what constitutes depression in general, and depression in old age in particular..." (Zarit, 1980, p. 190).

One criterion used, hospital admissions, may significantly underestimate the prevalence of depression in the elderly. Gurland (1976) reported evidence of reluctance to admit those under 21 years of age and those over 65 years of age to inpatient care. The elderly are more likely to be placed in nursing homes (Epstein & Simon, 1968). A second criterion, psychiatric diagnoses of community samples, may also underrepresent depression in the elderly. Gurland (1973) reported that many clinicians view depression as a normal concomitant of aging and therefore may not identify an elderly person with manifest symptoms of depression as requiring treatment. Some community-based epidemiologic studies have shown greater depressive symptomatology among the elderly when compared to younger age groups (Blazer & Houpt, 1979; Zung, 1967).

Given the previous research findings, it was somewhat surprising to find that the Epidemiologic Catchment Area Project (ECA) revealed a lower prevalence of major depressive episodes among the elderly than among younger age groups (Myers, Weissman, Tischler, Holzer, Leaf, Orvaschel, Anthony, Boyd, Burke, Kramer, & Stoltzman, 1984). A few years earlier, Weissman and Myers (1978) had concluded that the prevalence of major depression was less than 5% among elderly living in a community, a finding which largely concurs with the ECA report.

In a study which combined data from the ECA and an elderly sample (900 interviews), Blazer, Hughes, & George (1987) found that the percentage of elderly suffering some degree of depressive symptomatology was much larger than those diagnosed as suffering from major depression. Specifically, they found: (1) eight percent of the entire elderly sample had either a current major depressive episode, dysthymia, mixed depression and anxiety syndrome, or symptomatic depression; and (2) "Nearly 19%, however, had less severe dysphoric symptomatology..." (p. 283).

Until such time as depressive criteria are clear, unambiguous, and mutually agreed upon by all mental health professionals, and the subcategories of depression completely account for all variations, the exact scope of the problem of depression in the elderly may remain elusive.

Differential Diagnoses

That there are problems in the diagnosis and definition of depression in the elderly has already been noted. Although it now appears safe to say that depression has no single cause, causality in the aged becomes even more of a challenge to its proper diagnosis. There has been, for example, a generally accepted relationship between stressful life events and depression (Klerman, 1983). For the elderly, there is often a multiplied effect of stressful life events as losses accumulate and physical impairment prevents many enjoyments of daily living. It becomes intuitively comfortable, then, to assume that this must be the cause of depression in the elderly. Many researchers, however, have demonstrated that older persons may adapt to loss without becoming depressed (Bornstein, Clayton, Halikas, Maurice, & Robins, 1973). Hudgens, Morrison, & Barchha (1967) found that premorbid occurrence of stressful life events is nonetiological to the onset of depression. Clayton (1989) suggested that research into stressful life events and loss be limited to those events over which the subject has no control, and that even then this may not be the most fruitful area of research concerning depression.

There are several specific issues which may confound the correct diagnosis of depression in the elderly. Three of the issues are: (1) pseudodementia, (2) somatic manifestations, and (3) reactions from prescribed medications.

Pseudodementia is "a disorder resembling dementia that is not due to organic brain disease and can be reversed by treatment" (Dorland, 1988). It is estimated that 15% of elderly persons who have been diagnosed as depressed exhibit some symptoms of cognitive impairment or other signs of dementia (Salzman & Shader, 1979). Those patients who are misdiagnosed as senile tend to deteriorate rapidly. Without proper treatment for depression, they tend to exhibit more and more symptoms consistent with the diagnosis and thus perpetuate the error (Klerman, 1983).

Depression is often correlated with medical illness, even in the young. The following are some of the physical problems which may have concomitant depression: hyperthyroidism, diabetes, leukemia, congestive heart failure, malignancies, or idiopathic parkinsonism (Klerman, 1983). Since it may be possible to treat the depression which may accompany such illnesses, the importance of correct diagnosis is underscored.

There are four instances of disease or physical trauma in which depression in the elderly is most likely to follow or exist concurrently. Post-stroke depression occurs in 30-50% of stroke cases; heart attack patients frequently exhibit depression as well as other changes in personality; cancer often produces depression; and chronic pain sufferers are also frequently depressed (Patterson, 1989).

It is not easy to determine causality in any of these categories, but the latter is particularly problematic. The fact that pain is often accompanied by

depression does not tell us which came first. Romano and Turner (1985), in a review of chronic pain and depression, suggested that the literature on this subject is replete with methodological and conceptual errors. They did find that "coexisting pain and depression may be a final common presentation reached by a number of pathways" (p. 30). This really tells us very little.

Salzman and Shader (1979b) reported that it is not uncommon for the elderly to experience severe depressive reactions to physical illness, particularly in the case of heart disease and cancer. Researchers have also found that depression may be expressed indirectly through physical manifestations, a phenomenon called "masked depression" (Butler & Lewis, 1977; Lesse, 1974; Pfeiffer & Busse, 1973; Salzman & Shader, 1979b). All of this serves to underscore the difficulty of separating depression from physical concomitants.

Drugs may be responsible for inducing depression, for aggravating existing depression, or for producing depression-like symptoms. Since it is likely that the elderly do have at least one condition for which they are receiving medication, and may be taking several medications at once, this becomes a particularly difficult challenge for the diagnostician. It is estimated that 30% of all prescription medications are taken by the elderly; that 70% of the elderly also consume over-the-counter medications; and that because of their decreased rate of metabolism and excretion, 30-50% of the usual dose of many medications may be sufficient (Patterson, 1989). Patterson (1989)

further noted that amitriptyline, one of the most commonly used tricyclic anti-depressants in long-term health care facilities, is not the best choice for the elderly because it is likely to cause tachycardia.

Among the commonly used drugs that may cause depression are the antihypertensive and cardiovascular drugs such as reserpine and digitalis (Patterson, 1989). Depression is likely to occur in as many as 20% of elderly patients treated with antihypertensives (Whitlock & Evans, 1978). In addition, sedative-hypnotic agents such as alcohol, benzodiazepines and barbiturates, anti-inflammatory agents, analgesics, steroids, and antiparkinson drugs are among other drugs likely to cause depression or depression-like symptoms (Patterson, 1989).

While it may be helpful to view bereavement as a model for stress-induced depression (Clayton, 1989), the tendency to equate grief with depression may confuse the issue. Brink (1985) contended that in later life there are three main losses, any one of which is a possible source of grief: chronic physical disorders, loss of spouse, and retirement. Brink (1979) reported high rates of depression for the widowed, as well as greater hypochondriasis and suicide. Brink (1985) contended that widowhood is especially stressful for women; because of their longer life expectancy, women can expect approximately twelve years in this state. For men, however, the losses associated with retirement seem most traumatic (Brink, 1985). Although it seems fairly clear that there is some correlation between

depression and grief, it remains difficult, if not impossible with present assessment techniques, to correctly define the relationship or to assign causality.

In summary, the diagnosis of depression in the elderly is complicated by several factors. The usual affective, cognitive, and somatic symptoms associated with depression may result from other conditions. In the elderly, especially, the somatic symptoms lose their diagnostic usefulness. In addition, it appears that many health care professionals expect depression to accompany old age and may, therefore, misdiagnose depression in the elderly.

Selected Correlates of Depression

The variables chosen for inclusion in this study reflected three major areas of concern: physical, economic, and personal/social. Criteria for inclusion were substantial support in the literature and existing instruments for measuring the variable which could be considered appropriate for use with the elderly. That there is conflicting research utilizing these variables suggests that there may be methodological problems with the research, such as small samples, inadequate assessment instruments, and the paucity of true experimental design. In addition, there remains the problem of the definition of depression itself, as well as the confusion between depression and depressive symptoms, which were not differentiated in this study.

This section will first address the four correlates which were assessed using instruments: loneliness, social support, self-esteem, and immediate life situations, all of which were assumed to be personal/social in nature. Those variables considered demographic, and basically of the physical and economic areas of concern, will then be addressed.

Loneliness

Although there is considerable evidence to suggest that the loneliness/old-age association is not statistically supportable (e.g., Bates & Babchuk, 1961), it remains a commonly accepted part of the notion of old age. Other researchers have continued to claim that loneliness is related to suicide (Butler & Lewis, 1977) and to the ability to cope (Myers, Murphey, & Riker, 1981), both of which are considered correlates of depression.

Mullins and McNicholas (1987) reported on the Louis Harris and Associates surveys for the National Council on Aging (NCOA, 1974; 1981), which were conducted across the age spectrum from 18 to 64, and 65 and older, assessing two issues: (1) whether loneliness is a "very serious" problem for those over 65; and (2) whether the respondents over 65 had experienced loneliness as a "very serious" problem in their own lives. The results showed very clearly that people expect the elderly to be more lonely than they really are. It is especially interesting to note that of those in the 18 to 64 years-old category, 65% expected those over 65 to experience loneliness as a serious problem. Only 13% of those older than 65, however,

actually reported that loneliness was a serious problem (Mullins & McNicholas, 1987). The 1974 survey (Harris, 1975) did reveal an increasing experience of loneliness with advancing age (10% among those 65-69; 17% among those 80-89); among those with incomes less than \$3000 (23%); among those who had less than a high school education (15%); and among women (15%).

One of the problems in assessing any subjective attribute lies in its definition. Although "lonely" and "alone" are often used interchangeably, they are not synonymous. "Lonely" means "unhappy at being alone; longing for friends, company, etc." (Webster, 1980, p. 833). "Alone", on the other hand, means "apart from anything or anyone else" (Webster, 1980, p. 39). There appears to be a subjective/objective distinction between the two. In fact, Berg, Mellstrom, Persson, and Svanborg (1981) confirm, "living alone does not always mean suffering from loneliness" (p. 342).

Weiss (1982) has provided a helpful classification-social isolation and emotional isolation-which is perhaps sufficient to allow more specific definitions of loneliness to be subsumed under it. From this perspective, Mullins and McNicholas (1987) concluded the following:

Loneliness can be viewed as an affective emotional experience in which one begins to sense being apart from others, and apart from familiar support systems and mechanisms. This in turn can lead to, or include, a realization that social contacts are either diminishing, lacking,

or are not at a level, quantitatively or qualitatively, which is emotionally satisfying or supportive (p. 58).

Mullins and McNicholas (1987) further discussed three conditions which contribute to the experience of loneliness among the elderly: (1) amount and type of social contacts, (2) social role changes and subsequent loss of self-esteem, and (3) real and perceived health status. The general conclusion of these researchers was that "the individual situation of older persons is the primary social factor in the experience of loneliness" (Mullins & McNicholas, 1987, p. 59).

A surprising finding from a quantity of research (e.g., Blau, 1981; Dow & LaRossa, 1982) is that there is no significant relationship between the emotional well-being of the elderly and the frequency of their interaction with adult children. Whether there is a relationship between well-being and interaction with friends is equivocal (Blau, 1981; Snider, 1980), although Lowenthal and Haven (1968) found that having a "confidant" correlated significantly with emotional well-being.

Perhaps, as Palmore (1981) suggests, social interaction may not be too important to the elderly. He believes that old age is a time for "a shifting of attention from the outer world to the inner world of one's own feelings and thoughts. It involves the reduction of mental and emotional energy" (p. 3).

In a path model analysis of morale, Lee and Ishii-Kuntz (1988) found that interaction with neighbors reduced loneliness for men, but not for women,

and that having a confidant is more important than being married with respect to loneliness and morale.

Weeks, Michela, Peplau, and Bragg (1980) found that depression and loneliness were "clearly different constructs" (p. 4). They further stated that "Neither might be a direct cause of the other, but could share some common origin" (p. 4). For example, both might stem directly from losses of various kinds or from anxiety resulting from loss of identity as one is no longer an employee or a son/daughter or active in community service. Andersen (1989), in his study of the factor analysis of the UCLA Loneliness Scale, found "no predictive relationship" between loneliness and depression in a sample of college women (p. 72). There are obviously some conflicting conclusions from the literature regarding loneliness as a factor in depression, and it is not entirely clear just how the two constructs differ. Young (1982), however, stated

that though it is not surprising to find depression and sadness associated with loneliness, the overlap should not hinder the recognition and examination of loneliness as a separate clinical entity. In fact, the overlap reinforces the importance of understanding loneliness if treatment of depression among elderly clients is to be effective (pp. 60-61).

Social Support

While the previous section dealing with loneliness also began a discussion of social support, the construct will be treated separately in this section. There has been significant evidence to suggest that an adequate social support system is "directly related to the reported severity of psychological and physical symptoms and/or acts as a buffer between stressful life events and symptoms" (Zimet, Dahlen, Zimet, & Farley, 1988, p. 30). There remains, however, the eternal question of definition. There seems to be only general agreement that social support constitutes some kind of relationship between individuals, but what it is exactly is hard to tell. Shumaker and Brownell (1984) stated that social support was "an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient" (p. 13). Cohen & Syme (1985) claimed that such resources can be either positive or negative in effect. Lin, Dean, and Ensel (1986) expanded the notion of social support to include not only individuals, but also community.

Social network theory, as reviewed by Greenblatt and Chien (1983), assumes that support may come from three major sources: from natural care-givers (i.e., family or friends), from the community, and from institutions. In support of the latter, institutional support, is a study by Idler (1987) in which she found higher levels of religious involvement to be associated with lower levels of depressive symptomatology. She suggested four ways in

which religious involvement might have positive effects on the individual: (1) religious individuals may lead healthier lives than non-religious individuals; (2) religious groups require the giving as well as receiving of support from its members, thus fostering a kind of social cohesiveness; (3) religious involvement provides a body of knowledge and set of meanings which allow the individual to make sense of his/her experiences; and (4) religious involvement may act as a modifier of the perception of distress, aging, and suffering.

Barrera (1986), in a review of the literature linking stress and social support, found that persons under stress are more likely to seek out the support of others. Although the reasons for this occurrence are not clear, some researchers have suggested that they may be attempting to resupply a depleted sense of self-esteem (Pearlin, Menaghan, Lieberman, & Mullins, 1981).

While the problem of definition of social support remains a critical factor in evaluating the research linking social support and depression, there appears to be no disagreement that there is some relationship between the two constructs.

Self-Esteem

Krause (1987) contended that the relation between stress and self-esteem may be especially important for the elderly, because "stress may have a particularly deleterious effect on feelings of self-worth among older

adults" (p. 349). He used the stress-buffering conceptualization of social support to attempt to find those mechanisms which intervene between the experiencing of a stressful event and the onset of emotional disturbance. He found that "social support tends to reduce the deleterious effects of undesirable life-stress by bolstering feelings of self-esteem, and that this stress-buffering function affects depressive symptoms only indirectly through self-esteem" (Krause, 1987, p. 354). The latter finding is of major interest. As noted by Pearlin, Menaghan, Lieberman, and Mullins (1981), there is concern in the literature that self-esteem and depressive symptoms both measure the same construct. If this were true, then all measures in a study should have approximately the same impact on both self-esteem and depression measures. Krause (1987) found that self-esteem and depressive symptom measures did not measure the same construct.

In a study of adult males and females aged 55-75, Schultz and Moore (1984) found that self-esteem as measured by the Rosenberg scale correlated significantly with loneliness as measured by the UCLA scale ($r = -.38, p < .01$). This study revealed that patterns observed among the elderly did not differ from the patterns found among college samples, where most of the work on loneliness has been done; therefore, self-esteem was determined to be an appropriate variable for inclusion in this study.

Immediate Life Situations

Several researchers have argued that depression is qualitatively and existentially similar across the life span (e.g., Donahue, 1971; Feigenbaum, 1974; Weinstein & Khanna, 1986), thus supporting the view of depression as part of a stable personality trait. Weinstein and Khanna (1986) further argued that the stressors which may serve as precipitators to depression may also be similar. The difference may only be in the accumulation of those stresses "which may overcome the adaptive capacity of the individual" (Weinstein and Khanna, 1986, p. 36).

There are, however, many losses/stresses which are especially prevalent in the older age group. Gerner (1979) addressed the following factors:

(1) **Role.** The loss of a career role and the role of breadwinner/supporter of children is particularly noted.

(2) **Power.** There is loss of power associated with senior work positions, loss of political power, and the loss of power associated with old age itself.

(3) **Socioeconomic changes.** There may be actual loss of wealth, loss of control over life events, "loss of ability to undo things that one has regretted" (p. 109), and loss of self-esteem resulting from loss in social status.

(4) **Health.** General loss of somatic function, decrease in memory capabilities, or severe physical disability may relate to the onset of depression.

(5) Past losses. As a person ages, there is accumulated loss of friends, relatives, and acquaintances "leaving one increasingly a stranger in the present" (p. 109). In addition, there may be a reappearance of the necessity to cope with the death of one's parents, which may have taken place years earlier. It is suggested that the coping mechanisms which worked earlier may not be adequate in old age.

(6) Death. The knowledge of one's own mortality and anticipation of death (not necessarily fear of death) may be another stressor.

Although not denying that change can have its effect on depression, Jarvik (1983) argued that it is attitude, not age, which determines the outcome. She reflected upon the issue of parent-child role reversal with these words:

And sooner or later, depending on our state of health, we are required to accept the help of our children or their surrogates, to bow to their decisions (preferably without protest). At a time of life when our habits have become more firmly fixed than ever before, when we have fewer resources, fewer reserves, less capacity to cope with stress than ever before, we have to make a major role change, a major adjustment, a major reversal in our behavior towards our children-if we are fortunate enough to have children or surrogates willing to assume the parenting role (p. 119).

Jarvik and Russell (1979) suggested that those who are flexible enough to accept such role reversal are the ones who will tolerate illness and other stress without becoming depressed.

In a study of the effects of life stress, hassles, and self-efficacy on aging, Holahan and Holahan (1987) found that frequency of negative life events was only a mild predictor of depression and psychosomatic symptoms. They found that frequency of hassles was a much stronger predictor, both concurrently and one year later.

Holmes and Rahe (1967) developed a measure of life events for which the data suggest that the more life changes occur, the greater the likelihood of illness. Since the elderly are likely to experience major changes in such things as domicile, employment, income, and health status, this variable appears to be an important one to consider in any discussion of depression among the elderly.

Gender and Other Demographic Variables

While there has been some interest in gender issues since the American Psychological Association first began to publish journals, gender did not become widely used as a research variable until the 1960s (Jacklin, 1989). Even then, there has been a recognized inadequacy of the existing scientific bases for understanding gender differences in mental disorders. With this in mind, the National Institute of Mental Health in 1986 purposed to develop a research agenda for women's mental health issues (Russo, 1990).

The hope of those concerned with gender issues in research is that such an agenda will help to identify gender bias in research as well as to encourage funding for research which "goes beyond traditional biomedical paradigms" (Russo, 1990, p. 372).

Gender differences in mental disorders are found in prevalence and utilization rates as well as in diagnosis related to gender, marital status, and ethnicity. The NIMH Epidemiologic Catchment Area (ECA) Program (Eaton & Kessler, 1985) found substantial gender differences in prevalence of lifetime diagnoses. Women showed marked prevalence for major depressive episode, for example, while men predominated in antisocial personality and alcohol abuse/dependence (Robins, Helzer, Weissman, Orvaschel, Gruenberg, Burke, & Reiger).

Russo (1990) reported that "detailed findings of incidence and prevalence of disorders by gender, ethnicity, and marital status are not available." There are, however, service delivery statistics which show that never married and separated/divorced men had higher admission rates to mental health facilities than did women in those categories. In addition, married women had higher admission rates than married men (Russo & Sobel, 1981; Russo, Amaro, & Winter, 1987).

The NIMH women's mental health research agenda also recommends research which focuses upon the elderly. In 1978, people over age 65 were 11.3% of the U.S. population, but constituted only 4% of clients in community

mental health centers (Eichler & Parron, 1987). Although it is known that elderly women are among the poorest of the population of the United States, little is known about the mental health effects of that poverty (Eichler & Parron, (1987). One of the areas of major interest to developmental psychologists studying gender has been that of biology and behavior, including the notion of male vulnerability. This vulnerability is especially notable at the beginning and end of the life span (Jacklin, 1989).

Significantly more males than females are conceived, but many more females are born (Novitski, 1977), and more males than females have birth defects (Jacklin & Maccoby, 1982). This greater male vulnerability has been explained by Gualtieri and Hicks (1985) in terms of an "immunoreactive theory of selective male affliction" (p.427). They believe that the mother produces an antibody against a male fetus but not against a female fetus, resulting in a hostile uterine environment to the male fetus.

Regardless of the cause of this phenomenon, it does appear that this vulnerability reasserts itself in the declining years. We know, for example, that the average life expectancy for men is now 69.5 years, compared to 77.2 years for women (Myers, 1988). In addition, some studies (e.g., Hale & Cochran, 1986) have concluded that health problems and the general physical decline associated with aging may have more profound psychological impact on men than on women. Other studies have concluded that elderly women

report more depressive symptoms and physical problems than do elderly men (Bolla-Wilson & Bleecker, 1989).

Holahan and Holahan (1987) found a similar pattern of relationship between predictor and criterion variables for the two sexes, but found that women were worse off than men in terms of the absolute levels of the variables under examination. This is in general agreement with other work on the psychology of aging (Levy, Derogatis, Gallagher, & Gatz, 1980).

In a study of the reformulated learned helplessness model, Patrick and Moore (1988) found that those women over 60 at greatest risk for depression were not married, were not in good health, and had experienced a number of undesirable, uncontrollable life events.

Lee and Ishii-Kuntz (1988) found that for both sexes age is negatively correlated with morale, and that those with more education and better health are less lonely and have higher morale than others. Church attendance was significantly and positively related to morale for men. For both men and women, they found neighborhood interaction and being married reduced loneliness, but less so for women than for men. In addition, in terms of morale, having friends was more important than being married. Schultz and Moore (1984) found that age and gender were unrelated to loneliness.

Lomranz, Bergman, Eyal, and Shmolkin (1988), in a study of the effects of indoor and outdoor activities on depression and well-being, found that frequency of activity was a poor predictor of depressive affect for women, but

a good predictor for men. For women, their satisfaction from an indoor activity was the best predictor. The authors stated that this study "suggests that depression and well-being, though substantially correlated, are not necessarily opposite poles of the same continuum, and they may be related to relevant variables in different ways" (Lomranz, Bergman, Eyal, & Shmolkin, 1988, p. 310).

Although researchers have thought that women were more prone to loneliness than men, it may be that men just have not been encouraged to admit their loneliness (Meer, 1985). Hays and DiMatteo (1987) cited a review by Borys and Perlman (1985) which claimed that 22% of men and 30% of women report loneliness. Whether this is true across ages and also for depression is unclear.

The Midtown Manhattan Longitudinal Study (Srole & Fischer, 1980), cited by Klerman (1983), found that the general mental health of both men and women improved over a 20-year period. In addition, the study found that the incidence of depression in women declined significantly over the 20 years, and that after age 55, men begin to approximate the incidence rate of women. Of special interest to women is the additional finding that depression does not increase during the menopausal years, but rather is highest in women under 35 and gradually decreases with age (Winokur, 1973).

It has been noted by several researchers that older women are more likely to make use of mental health services than older men (e.g., Redick &

Taub, 1980). Horwitz (1977) suggested that older men may fear appearing weak; Roy and Storandt (1989) hypothesized that women may be more perceptive of psychological symptoms than men. This notion, however, was not supported by the results of their own study.

Idler (1987), in a study of religious involvement and elderly health, reported that age and income were both more predictive of depression in men than in women. In a study of elderly women only, Primas (1985) found that perceived income or financial security was significantly related to morale.

In summary, there appears to be support in the literature for the inclusion of the demographic variables of gender (Eaton & Kessler, 1985), age (Lee & Ishii-Kuntz, 1988), income (Primas, 1985), education and employment status (Frerichs, Aneshensel & Clark, 1980), and health (Gerner, 1979) as factors in depression among the elderly. Although marital status was considered by Russo & Sobel (1981) in their study of service delivery statistics, Russo (1990) reported a general lack of detailed findings regarding mental disorders by gender and marital status. It was for that reason that marital status was considered a variable in this study. Further, no study examined had considered the gender x marital status interaction as it might relate to depression. In a study which assesses both gender and marital status as they relate to depression, it would seem logical that the interaction of those two variables also be addressed.

CHAPTER II

METHODOLOGY

Statement of the Problem

The study of depression among the elderly has produced a quantity of literature over the past ten years. A review of the literature for the past five years, however, revealed no systematic study of the relationship of gender to depression and its correlates. In addition, there has been little attention paid to the relationship of marital status to depression or its correlates. Often, when gender and marital status data were obtained, they were merely tabulated and not considered as variables. In addition, marital status has usually been considered a dichotomous factor-married or not married; little attempt has been made to investigate the effects of being divorced, widowed, or married more than once.

This study attempted to determine the relationship of gender and marital status to depression and selected correlates in a well elderly population. In addition, the study was designed to evaluate the relationship of the gender and marital status interaction to depression. Information on six levels of marital status was obtained (see Appendix B.)

Description of the Sample

The sample for this study consisted of members of various senior citizen organizations located in a midwestern state, secured through the cooperation of the state Consortium on Gerontology. Thirteen sites were involved in the project. These sites represented a good cross-section of villages, small towns, and larger urban centers in the eastern third of the state.

A total of 442 questionnaires were given to senior citizens who came to community senior citizen centers for noon meals. After eliminating questionnaires which were returned blank or largely incomplete, the sample consisted of 317 well elderly: 214 females and 103 males. The sample included men and women aged 55 and older, because that is the age required for membership in senior citizen organizations. Subjects were considered "well" if they were able to attend the meal service. This ensured that persons who were not able to participate in social functions which may have followed the meal were still included in the sample. All were voluntary subjects.

Procedures for Data Collection

Subjects for the study were obtained through contacts provided by the state Consortium on Gerontology of an upper midwestern state. Names of area project directors were provided to the researcher, who then contacted each one personally to present a request for participation. Those directors

either made a unilateral decision to participate in the study or referred the idea to their sites for approval. Fourteen senior citizen organizations were contacted, and 13 agreed to participate. All sites were prepared in advance for the researcher's visit by the project directors.

Subjects were administered the study instruments and personal data forms on a voluntary basis in a group setting during the month of June, 1990. The researcher briefly explained the purpose of the study and the content of the consent forms. After allowing subjects an opportunity to ask questions, the researcher asked those volunteering to be subjects to sign the consent form. These consent forms were collected prior to the administration of the study instruments.

All packets and study instruments were internally coded and did not require names of subjects, thus ensuring complete anonymity. Each packet contained the personal information sheets first, followed by the study instruments, which were in one of four counterbalanced conditions to minimize difficulty or fatigue effects. Data collection took approximately one hour in each site.

Senior citizen centers involved in the data collection were given an honorarium of \$25.00 for every 20 persons who participated, disregarding the usability/unusability of the questionnaires.

Research Questions

This study was designed to address the following questions:

- (1) By gender, what is the relationship of the inventory scales scores and the demographic variables to the CES-D Depression Scale?
- (2) Are there significant gender differences on the inventory scales scores and on the demographic variables?
- (3) Is there a gender by marital status interaction on the CES-D Depression Scale scores and on the inventory scales scores?

Design and Statistical Procedure

This investigation utilized the survey research method to study selected characteristics of the elderly and to determine the incidence, distribution, and interrelations of selected psychological and demographic variables.

Statistical procedures included Pearson correlation, t-test, analysis of variance, chi-square, and descriptive statistics. The SPSS-x statistical program was used for all analyses. Significance was set at the .05 level.

Instrumentation

Center for Epidemiologic Studies-Depression Scale

The Center for Epidemiologic Studies-Depression Scale (CES-D) (Radloff, 1977) was developed as a research instrument for use in the study of depression in the general population. It differs from other frequently used instruments, such as the Beck Depression Inventory, which were normed on clinical populations, and which are intended as diagnostic measures. The

definition of the depression variable in the CES-D is expressed in this statement:

The CES-D was designed to measure current level of depressive symptomatology, with emphasis on the affective component, depressed mood. The symptoms are among those on which a diagnosis of clinical depression is based but which may also accompany other diagnoses (including "normal") to some degree (Radloff, 1977, p. 385).

The CES-D is a short, self-report measure, suitable for use by lay interviewers or as a paper and pencil instrument. It contains 20 items, takes about five minutes to complete, and does not contain difficult vocabulary. It is scored on a four-point Likert scale, with a higher score indicating greater depression. Scores can range from zero to 60. It has been shown to have similar validity, reliability and factor structure for various population subgroups, including the elderly (Radloff, 1977).

In the Community Health Assessment Project (CMHA) for which the measure was developed, the following scale properties were obtained: (1) internal consistency was found to be about .85 in the general population and .90 in the patient sample (coefficient alpha and Spearman-Brown split-halves method); (2) test-retest correlations obtained 2, 4, 6, and 8 weeks apart averaged .57; intervals of 3, 6, and 12 months yielded correlations only a bit lower (Radloff, 1977); (3) discriminant validity has been shown by a number of studies: e.g., Craig and Van Natta (1976) found the general

population had an average score of 9; a sample of psychiatric inpatients had an average score of 24; and a sample of acutely depressed outpatients averaged about 38. The CES-D has also been found to correlate very highly with the Beck Depression Inventory and the Zung Self-rating Depression Scale (Weissman, Prusoff, & Newberry, 1975).

For elderly populations, normative data is similar to general population data: mean CES-D scores across studies were between 8 and 9, with standard deviations about 8 for community elderly (Radloff & Teri, 1986). Reliability coefficients have remained high (Himmelfarb & Murrell, 1983), and scores were not normatively higher among older adults than among younger adults (Radloff & Teri, 1986).

Gender, socioeconomic status, and marital status were found to be related to depression: e.g., women reported higher scores than men, and those divorced, widowed, or separated reported higher scores than those never married or currently married (Radloff, 1980; Sayetta, 1980).

In summary, it appeared that the CES-D was a promising instrument to use with community-residing elderly populations. There was no indication from any of the literature surveyed that the scale was difficult to comprehend or that it was in all objectionable. Since it was developed by a department of the National Institute of Mental Health, the scale is in the public domain, which may encourage further research use.

The UCLA Loneliness Scale

The University of California-Los Angeles Loneliness Scale (UCLA) may be the most widely used instrument of its kind. Work on it was begun in 1976, and it was revised in 1980. According to Morelli (1984), the revised scale is one of three scales most often cited in research.

The intent of Russell and his colleagues was to "create a psychometrically adequate, easily administered, and generally available scale that would serve as a stimulus for empirical research on loneliness" (Peplau & Perlman, 1982, p. 90). They further reported that they achieved a "global or unidimensional approach to measuring loneliness" (p. 90). The scale had high internal consistency, with a coefficient alpha of .96, and with item-total correlations of .51 or higher.

Many studies have found relationships between the UCLA Loneliness Scale and other relevant constructs such as self-disclosure (Morelli, 1984); self-concept (Goswich & Jones, 1981); and depression (Morelli, 1984). Bragg (1979) as cited in Morelli (1984) found that depression and loneliness were related but had different correlates: depression was related to anger and non-social aspects of life, and loneliness was related to social aspects, such as low initiation of contact with friends. The revised UCLA Loneliness Scale was found to correlate .51 with depression and -.49 with self-esteem; no social desirability effect was found (Morelli, 1984).

Andersen (1989) reaffirmed the UCLA Loneliness Scale's discriminant validity; however, he found three interpretable factors instead of the earlier four factors (Russell, Peplau, & Cutrona, 1980). He found over 75% of the accountable variance from one factor alone, a trait anxiety factor. Andersen (1989) found no predictive relationship between depression and loneliness, using the Beck Depression Inventory as the depression measure.

The UCLA Loneliness Scale is scored on a four-point Likert scale, with a higher score indicating greater loneliness. The scale was not altered for this study.

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (S-E) (1965) was designed to assess the self-acceptance factor in loneliness. There were ten items which were answered on a four-point Likert-type scale, ranging from (1) strongly agree to (4) strongly disagree. Each item was scored, however, as being either in agreement or disagreement.

Silbert and Tippitt (1965) reported convergent validity coefficients from .56 to .83 when the Rosenberg was compared to other self-acceptance measures. They also reported a test-retest correlation of .85 over a two-week period. In evaluating discriminant validity, Silbert and Tippitt (1965) found correlations of .21 to .53 with self-stability instruments. The Rosenberg's predictive validity has not been empirically tested; however, the instrument does show a relationship between positive self-esteem and less depression.

For this study, the instrument was scored so that a lower score indicated higher self-esteem, resulting in a positive correlation with the other instruments. The decision to reverse the scoring was to maintain the Likert format used for the other inventories, thus eliminating a potential source of confusion for this population.

This instrument was originally intended for use with high school students and there may be some question about its use with the elderly. No studies were found, however, to discredit its use with this population.

The Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988) was originally constructed with 24 items addressing relationships (family, friends, and significant other). Each item was rated on a 5-point Likert-type scale. After repeated factor analyses, the scale was reduced to the present 12 items, with four items for each of three scales. A 7-point rating scale was used to increase response variability and minimize ceiling effects.

Means and standard deviations on the subscales and total scale were as follows: Significant Other: $M=5.74$, $SD=1.25$; Family: $M=5.80$, $SD=1.12$; Friends: $M=5.85$, $SD=0.94$; Total: $M=5.80$, $SD=0.86$. Cronbach's coefficient alpha was .88 for the total scale; for the subscales mentioned above, they were .91, .87, and .85 respectively.

Test-retest reliability for the above mentioned scales were .72, .85, and .75, respectively, two to three months after the initial test. For the total test, the test-retest reliability was .85.

In support of construct validity were the following: Perceived support from Family was significantly inversely related to both depression, $r=-.24$, and anxiety, $r=-.18$. Perceived support from Friends was negatively related to depression symptoms, $r=-.24$, but not to anxiety. Perceived support from Significant Other was minimally but significantly negatively related to depression, $r=-.13$, $p<.05$, as was the scale as a whole, $r=-.25$, $p<.01$ (Zimet, Dahlem, Zimet, & Farley, 1988).

In terms of gender effects, the authors reported that women reported greater support from both friends and a significant other and more symptoms related to depression than men. However, the relationship between depressive symptoms and perceived support from friends was greater for men than for women. Sarason, Levine, Basham, & Sarason (1983) found the opposite results: social support and depression were more highly correlated for women than for men.

The MSPSS was normed on a college population which was relatively homogeneous. Its use with the elderly has not been adequately tested.

Although the test is intended to be scored using a 7-point Likert scale, it was deemed important for this study and population not to deviate from the 4-point scales used in the other instruments. In addition, some research into

test construction indicates that it is not useful to have many choices or a middle value (Angleitner, Jones, & Lohr, 1986). Goldberg (1978 & 1981), as cited in Angleitner and Wiggins (1986), has found that subjects may interpret middle-response options in one of four ways: a situational attribution, an expression of uncertainty, ambiguity of the item, or neutrality. It was also deemed important not to deviate from the direction of the scoring on the other scales in order to minimize confusion for the elderly population who are not test-sophisticated. For these reasons, this instrument was scored in the opposite direction from the original; thus, lower scores mean higher support. Since it was not the purpose of this study to compare the results of the MSPSS in this study with the original descriptive statistics, this decision seemed justifiable.

Schedule of Recent Experience

The Schedule of Recent Experience (SRE) (Holmes, 1981) was originally named the Social Readjustment Rating Scale (Holmes & Rahe, 1967). There appears to be no format difference between the two scales. There are 42 items in the scale, each item a life event. The items are each weighted, and scores are derived by multiplying the number of times each life event occurred during the past year or two by the weighted value assigned to that event.

Weights were arrived at by having a sample of 394 subjects complete SRE items and estimate the amount of change associated with each item

relative to marriage, which had been given an arbitrary value of 500. A mean score, divided by 10, was calculated for each item. The means were then ranked, and the resultant values were used to weight the relative impact of the SRE life events.

The authors reported that if the total Life Change Score (LCS) is >300 , there is an 80% chance of illness in the near future (Conoley & Kramer, 1989). They further reported reliability coefficients of .78 to .83 for test-retest intervals of 2 weeks to 5 months, and $r=.34$ for an interval of two years (Conoley & Kramer, 1989).

The validity data that have been accumulated are based primarily on retrospective and prospective studies on the predictability of health change occurring following a life change. Resident physicians who experienced mild life crises (LCS=150-190) in one year showed a 37% chance of health change during the following year; those who experienced moderate crisis (LCS=200-299), a 51% chance; and those who experienced a major life crisis (LCS= >300) showed a 79% chance of health change during the following year (Conoley & Kramer, 1989).

In a second review of the SRE, Zarske (Conoley & Kramer, 1989, p. 722) expressed the concern that the items endorsed may not be a reflection of stimulus-defined stress, but rather "an assessment of the respondent's subjective world of how they feel at the time of the test administration." He further noted, however, that the instrument is a major contribution because it

provides a quantitative index for what is essentially a qualitative conceptualization of stress. Zarske (Conoley & Kramer, 1989) further stated that the instrument may be most valid with the 25-55 year-old age group, but no data were found to discredit its use with other age level participants.

CHAPTER III

RESULTS

Descriptive Data of the Sample

Table 1 gives a description of the 317 subjects used in this study. Of the 103 males, 53 were age 55-75, and 50 were age 76 to over 85. Of the 214 females, 125 were age 55-75, and 89 were age 76 to over 85. The male sample was thus slightly older than the female sample: 48.5% of the males were over 75, while 41.6% of the females were over 75.

In terms of marital status, 72.8% of the men were living with their spouse, while 38.8% of the females were living with their spouse. In other words, 57% of the females were now widowed or divorced. In addition, nearly 4% of the females and 6% of the males had never married.

About 55% of both men and women had not experienced the loss of a significant person in the past six months; however, the women reported having experienced twice as many multiple losses in that time period as the men.

Slightly more women than men reported working part- or full-time, but the percentage of men retired but working part-time was about twice that of women. The female sample was more highly educated than the male: 35.9%

of the females had post-high school training/education, compared to only 18.4% of the males.

The males reported having a higher monthly income than the females: 47.5% of the males and 29.9% of the females earned more than \$1000 per month.

The sample reported that they were in relatively good health, with the female sample slightly healthier. The reported use of some medication on a regular basis was nearly 80% for both men and women.

As a total group, almost 89% had living children, and of those an overwhelming 97% reported a satisfactory relationship with their children. Almost 65% of those who had children reported seeing or talking with them more than once a week.

Findings Related to the Research Questions

The first question presented in this study was: **What is the relationship of the inventory scales scores and the demographic variables to the CES-D depression score?**

Data relevant to the question are presented in Table 2. The strongest relationships for both the female and male samples were between the UCLA Loneliness Scale score and the Rosenberg Self-Esteem Scale score with the CES-D depression scale score. On the demographic variables for women, total number of medications taken showed a moderate relationship; for the men, self-reported health also showed a moderate relationship.

Table 1

Descriptive Data for Males, Females, and Total Group

Variables	Males (<u>n</u> =103) 32.5%		Females (<u>n</u> =214) 67.5%		Total Group (<u>n</u> =317) 100%	
	f	%	f	%	f	%
Age						
55-65	8	7.8	28	13.1	36	11.4
66-75	45	43.7	97	45.3	142	44.7
76-85	37	35.9	76	35.5	113	35.7
> 85	13	12.6	13	6.1	26	8.2
Marital Status						
Married 1X, w/spouse	64	62.1	67	31.3	131	41.3
Married 1X, div/wid	20	19.4	108	50.5	128	40.4
Married >1X, w/spouse	11	10.7	16	7.5	27	8.5
Married >1X, div/wid	2	1.9	15	7.0	17	5.4
Never married	6	5.8	8	3.7	14	4.4
Loss (Past 6 mo.)						
No loss	58	56.3	119	55.6	177	55.8
Spouse	3	2.9	4	1.9	7	2.2
Close friend	25	24.3	39	18.2	64	20.2
Fam. Member	14	13.6	36	16.8	50	15.8
> One loss	3	2.9	16	7.5	19	6.0
Employment						
Not retired	5	4.9	16	7.5	21	6.6
Retired	72	69.9	147	68.7	219	69.1
Retired, empl. part-time	22	21.4	22	10.3	44	13.9
Never empl.	4	3.9	29	13.5	33	10.4

Table 1 (Continued)

Variables	f	%	f	%	f	%
Education						
<High School	59	57.3	82	38.3	141	44.5
High School	25	24.3	55	25.7	80	25.2
Some Training post-H.S.	15	14.6	48	22.4	63	19.9
Grad. College	2	1.9	24	11.2	26	8.2
Post-grad.	2	1.9	5	2.3	7	2.2
Monthly Income						
< \$500	21	20.4	62	29.0	83	26.3
\$501-1000	33	32.0	87	40.7	120	38.0
\$1001-2000	30	29.1	37	17.3	67	21.2
> \$2000	19	18.4	27	12.6	46	14.6
Health						
Excellent	10	9.0	27	12.6	37	11.7
Good	44	42.7	122	57.0	166	52.4
Fair	46	44.7	56	26.2	102	32.3
Poor	3	2.9	8	3.7	11	3.5
Children Born						
None	17	16.5	19	8.9	36	11.4
1-3	43	41.3	101	47.2	144	45.4
4-6	37	35.9	80	37.3	117	36.9
7-9	6	5.8	9	4.2	15	4.7
10-12	0	0.0	5	2.4	5	1.6
# Children Living						
1-3	48	46.7	110	51.4	158	49.8
4-6	33	32.0	69	32.3	102	32.2
7-9	5	4.8	11	5.1	16	5.5
10-12	0	0.0	5	2.3	5	1.1
N/A	17	16.5	19	8.9	36	11.4
Visits w/Children >once a week						
Yes	64	62.1	142	66.4	206	65.0
No	22	21.4	49	22.9	71	22.4
N/A	17	16.5	19	8.9	36	11.4

Table 1 (Continued)

Variables	f	%	f	%	f	%
Satisfactory Relationship w/ Children						
Yes	81	78.6	188	87.9	269	85.0
No	5	4.9	4	1.9	9	2.8
N/A	17	16.5	19	8.9	36	11.4
Medication taken Regularly						
Yes	81	78.6	170	79.4	251	79.2
No	22	21.4	44	20.6	66	20.8

The second research question of the study was: **Are there significant gender differences on the inventory scale scores and on the demographic variables?**

The findings relevant to this question are reported in Tables 3 and 4. Among the inventory scale scores, data in Table 3 shows that only on the UCLA Loneliness Scale was there a significant gender difference, with the males lonelier than the females of the sample. For the demographic variables that were considered to be near interval in level of measurement, the data in Table 4 indicates that males were older, had a higher monthly income, and reported better health, while females had a higher educational level.

For demographic data that were at the nominal level of measurement, chi-square tests showed associational differences on employment ($\chi^2=14.44$, $p<.02$) and marital status ($\chi^2=44.08$, $p<001$), but no associational differences

on personal loss by death of family member or close friend, medications, visits from children, of relationships with children.

The last research question of this body was: Is there a gender by marital status interaction on the CES-D Depression Scale scores and on the inventory scales scores?

Table 2

Correlation Coefficients Between the Inventory Scores and Selected Demographic Variables With the CES-D Scale*

Females			Males		
Variables	r	Prob. level	Variables	r	Prob. level
UCLA*	.432	.000	UCLA*	.622	.000
S-E*	.414	.000	S-E*	.545	.000
Meds total	.305	.000	Health	.371	.000
Health	.284	.000	MSPSS-3*	.256	.011
SRE*	.237	.001	MSPSS-2*	.222	.027
Age	.169	.013	SRE*	.205	.042
Education	-.166	.015	MSPSS-1*	.186	.065
MSPSS-3*	.160	.022	Meds total	.173	.081
Loss	.127	.064	Age	.134	.185
MSPSS-1*	.112	.107	Income	-.087	.389
MSPSS-2*	.095	.173	Education	-.072	.480
Income	-.021	.761	Loss	-.051	.617

* CES-D = Center for Epidemiologic Studies Depression Scale (Higher score = greater depression); S-E = Rosenberg Self Esteem Scale (Lower score = greater self-esteem); SRE = Schedule of Recent Events (Higher score = greater number of or more impactful recent stressful life events); UCLA = University of California-Los Angeles Loneliness Scale (Higher score = greater loneliness); MSPSS-1 = Multidimensional Scale of Perceived Social Support-Significant Other; MSPSS-2 = Multidimensional Scale of Perceived Social Support-Family; MSPSS-3 = Multidimensional Scale of Perceived Social Support-Friends (Lower score = higher support on all three scales).

Table 3

Means and Standard Deviations of the CES-D, SRE,
UCLA, MSPSS-1, MSPSS-2, MSPSS-3, and S-E for Males,
Females and Total Group

Instrument	M	S.D.	t value	Prob. level
CES-D				
Males	13.54	8.21		
Females	13.44	7.75		
Total	13.47	7.89	.10	.92
SRE				
Males	114.71	112.59		
Females	112.96	91.65		
Total	113.53	98.80	.15	.88
UCLA				
Males	40.06	7.39		
Females	37.36	7.87		
Total	38.22	7.81	2.89	.01
MSPSS-1				
Males	6.07	1.99		
Females	6.47	2.51		
Total	6.34	2.35	1.51	.13
MSPSS-2				
Males	6.33	2.03		
Females	6.07	2.32		
Total	6.16	2.23	.97	.33
MSPSS-3				
Males	7.02	2.32		
Females	6.65	2.29		
Total	6.77	2.30	1.33	.18
S-E				
Males	19.71	4.48		
Females	19.19	4.31		
Total	19.36	4.36	.97	.33

Table 4

Significant t-Tests for Demographic Data
on Age, Education, Income, and Health

Variable	M	SD	t value	Prob. level
Age				
Male	4.61	1.47	2.41	.016
Female	4.19	1.44		
Education				
Male	1.67	.93	-3.89	.000
Female	2.13	1.12		
Income				
Male	2.46	1.02	2.69	.008
Female	2.14	.98		
Health				
Male	2.41	.71	1.00	.021
Female	2.21	.71		

Age: 4=71-75, 5=76-80; Education: 1=less than high school diploma, 2=graduated high school; Income: 2=\$501-1000/month, 3=\$1001-2000/month; Health: 2=good, 3=fair.

Results of analysis of variance tests for the CES-D, UCLA, SRE, S-E, and the three MSPSS scales are presented in Tables 5-11.

No significant gender by marital status interaction was found on the CES-D Scale as shown in Table 5.

As shown in Table 6, no significant interaction was found on the UCLA Loneliness Scale, either, but a gender difference was found, with males more lonely than females.

Table 5

Analysis of Variance for the
CES-D Depression Scale by Marital Status
and Gender

Source of Variation	SS	DF	F	Sig. of MS	value	F
Marital Status	9.05	2	4.53	.07		.93
Gender	3.83	1	3.83	.06		.80
Marital x Gender	261.28	2	130.64	2.11		.12
Explained	271.26	5	54.25	.88		.50
Residual	17996.80	291	61.85			
Total	18268.06	296	61.72			

Table 6

Analysis of Variance for the UCLA Loneliness Scale
by Marital Status and Gender

Source of Variation	SS	DF	MS	F value	Sig. of F
Marital Status	136.77	2	68.30	1.17	.31
Gender	332.45	1	332.45	5.71	.01*
Marital x Gender	.40	2	.20	.00	.99
Explained	550.49	5	110.10	1.89	.10
Residual	16951.05	291	58.25		
Total	17501.54	296	59.13		

* Females (M=37.36)
Males (M=39.89)

The SRE scale scores also showed no interaction of marital status and gender, and the data are shown in Table 7.

There was also no significant interaction found on the Rosenberg Self-Esteem Scale. Data are shown in Table 8.

Table 7

Analysis of Variance for the
Schedule of Recent Events Scale
by Marital Status and Gender

Source of Variation	SS	DF	MS	F value	Sig. of F
Marital Status	18558.67	2	9279.33	.94	.39
Gender	731.85	1	731.85	.07	.79
Marital x Gender	1915.49	2	957.74	.10	.91
Explained	20623.20	5	4124.64	.42	.84
Residual	2887663.19	291	9923.24		
Total	2908286.39	296	9825.29		

Table 8

Analysis of Variance for the
Rosenberg Self-Esteem Scale by
Marital Status and Gender

Source of Variation	SS	DF	MS	F value	Sig. of F
Marital Status	2.26	2	1.13	.06	.94
Gender	32.65	1	32.65	1.85	.18
Marital x Gender	.17	2	.08	.01	.99
Explained	34.26	5	6.85	.39	.86
Residual	4362.27	247	17.66		
Total	4396.53	252	17.45		

Table 9

Analysis of Variance for the MSPSS-1 (Significant Other)
by Marital Status and Gender

Source of Variation	SS	DF	MS	F value	Sig. of F
Marital Status	46.38	2	23.19	4.20	.02*
Gender	4.22	1	4.22	.76	.38
Marital x Gender	1.67	2	.84	.15	.86
Explained	62.20	5	12.44	2.25	.05
Residual	1606.13	291	5.52		
Total	1668.33	296	5.64		

* Married with spouse (M=5.94); never married (M=6.66); no current spouse (M=7.54). Lower score means more support.

Table 10

Analysis of Variance of the MSPSS-2 (Family)
by Marital Status and Gender

Source of Variation	SS	DF	MS	F Value	Sig. of F
Marital Status	87.51	2	9.47	9.47	.00*
Gender	.14	1	.14	.03	.86
Marital x Gender	12.23	2	6.12	1.32	.27
Explained	102.90	5	20.58	4.45	.00
Residual	1141.37	247	4.62		
Total	1244.27	252	4.94		

* Married with spouse (M=6.87); Never married (M=6.59); No current spouse (M=7.50).

No marital status by gender interaction was found on any of the MSPSS scores; however, there were marital status category differences on the MSPSS-1 (Significant Other) and MSPSS-2 (Family support). The results of the ANOVA for the three social support scales are shown in Tables 9 through 11.

Table 11

Analysis of Variance for the MSPSS-3 (Friends)
by Marital Status and Gender

Source of Variation	SS	DF	MS	F value	Sig. of F
Marital Status	5.91	2	2.95	.59	.56
Gender	8.28	1	8.28	1.65	.20
Marital x Gender	3.55	2	1.78	.35	.70
Explained	22.55	5	4.49	.89	.49
Residual	1240.79	247	5.02		
Total	1263.24	252	5.01		

Supplemental Findings

Analysis of the data suggested that the age of the participants might be a relevant independent variable for use in exploring differences among the inventories and demographic variables. This avenue of statistical exploration was pursued. For statistical analysis (ANOVA) age categories 55-65 were classified as group I, ages 66-75 were classified as group II, ages 76-80 were reclassified as group III, and participants 81 years of age and older were

classified as group IV. This reclassification was necessary because of the small number of subjects in the original age categories.

Depression as measured by the CES-D showed a significant ANOVA difference by age, but not by gender, and no age by gender interaction was found. The oldest group (81 years and older) showed the highest depression level, and the youngest group (ages 66-75) showed the lowest level of depression.

When women as a group were considered, and age was the independent variable, analysis of variance yielded significant differences by age on the CES-D, on the MSPSS-2 (Family support), and on the total number of medications taken. Women 76-80 years old were more depressed than those 66-75 years old. Women in the 55-65 age group showed less family support compared to the 76-80 year old group. Women over 80 years of age took significantly more types of medication than the other three age groups.

When age was considered by men as an independent variable, the ANOVA results showed that men age 55-65 had a significantly greater accumulation of traumatic recent experience than each of the other three age groups. Likewise, the youngest age group (55-65) used a significantly greater number of types of medications than men ages 66-75. ANOVA results also showed that men in the 55-65 age category had a significantly higher self-

esteem score than any of the other three age groups. Finally, it was found that the oldest group of men (81 years and older) had a higher CES-D score than men aged 66-75.

Since there were significant t-test values by gender for medication 2: high blood pressure ($p < .02$) and medication 3: sleeping problems ($p < .04$), it was decided to further analyze each medication by gender. While the chi-square value did not reach significance, it did reveal a trend ($\chi^2 = 10.90$, $p < .15$). Results of this examination of the use of medications for each ailment by gender are presented in Table 12.

Table 12
Use of Medications for Specific Ailments
by Gender

Ailment	Males (n=82) %	Females (n=173) %
1. Arthritis	11.0	8.7
2. High blood pressure	17.1	30.6
3. Sleeping problems	2.4	7.5
4. Heart	19.5	12.1
5. Cancer	4.9	3.5
6. Nerves	7.3	4.0
7. Stomach	12.2	8.7
8. Other	25.6	24.9

CHAPTER IV

DISCUSSION

Summary

This exploratory study was designed to focus primarily on depression and selected correlates among the well elderly. The study attempted to determine if there were gender and marital status differences on depression and other related personality and demographic variables. In addition, the study examined the relationship of the gender by marital status interaction to depression and its correlates in this sample.

Subjects for this study (n=317) were well elderly males (n=103) and females (n=214) who utilized community senior citizen meal sites. After the study was explained and consent forms signed, subjects were administered the questionnaire in a group setting. The questionnaire consisted of demographic questions, an instrument assessing depression, and four instruments reflecting probable correlates of depression. The demographic variables assessed were gender, age, marital status, education, personal loss, employment, health, medications, number of children born and living, frequency of visits with children, and satisfaction of relationship with children. Instruments used were the Center for Epidemiologic Studies-Depression Scale

(CES-D), University of California-Los Angeles Loneliness Scale (UCLA), Schedule of Recent Events (SRE), Rosenberg Self-Esteem Scale (S-E), and the Multidimensional Scale of Perceived Social Support (MSPSS-1=support from Significant Other, MSPSS-2=support from Family, MSPSS-3=support from Friends).

The research questions for this study were:

Question 1: By gender, what is the relationship of the inventory scales scores and the demographic variables to the CES-D Depression Scale?

Question 2: Are there significant gender differences on the inventory scales scores and on the demographic variables?

Question 3: Is there a gender by marital status interaction on the CES-D Depression Scale scores and on the other inventory scales scores?

Discussion

The study revealed that both males and females scored well above the mean CES-D scores of 9 (SD=9) for males over age 55 and 11 (SD=9) for females older than 55 reported by Murrell, Himmelfarb, and Wright (1983). Males in this study scored 13.5 (SD=8.2) and females scored 13.4 (SD=7.8) on the CES-D. Neither mean, however, approached the cut-off score of 16, which has been used to differentiate clinical samples from community samples (Radloff & Teri, 1986). Thus, it would appear that this sample may have been more depressed than some other similar samples, but it was still well within a "normal" range. These results largely concu with those of Blazer, Hughes,

and George (1987), in that more people from both samples apparently suffered some depressive symptomatology rather than major depression. Pearson correlation for females yielded significant relationships ($p < .01$) between the CES-D and the following variables: age, health, total medication, SRE, UCLA, MSPSS-3, and S-E. For males, the significant relationships were between the CES-D and health, total number of medications, SRE, UCLA, MSPSS-2, MSPSS-3, and S-E. For both males and females, however, only the UCLA and S-E yielded a Pearson correlation coefficient greater than .40. Thus, there was only marginal support for the relationship between stressful life events and depression as noted by Klerman (1983). In addition, the relationship of physical illness to depression (LaRue, Bank, Jarvik, & Hetland, 1979), as measured by self-reported health assessment, is also only mildly supported for both males and females.

Significant gender differences ($p < .03$) were found on employment, health, marital status, education, and income using chi-square cross-tabulation. The t-tests yielded gender differences also on loneliness. The male sample was older, in poorer health, had less education and had more income than females. In addition, the males were lonelier. There were also significant gender differences on the use of medications for two ailments: high blood pressure and sleeping problems. In both cases, significantly more women took medications for those ailments than did men. Although significance was not reached on the other ailments, the data show that more

males took medications for arthritis, heart problems, cancer, nerves, and stomach problems than did women.

Most gender differences except that found on the UCLA Loneliness Scale were expected. Many other studies which have assessed the loneliness/depression relationship have not looked at gender differences (e.g., Schultz & Moore, 1984). In addition, most of the loneliness literature involves the use of college men and women as subjects and has been largely uninvolved with the elderly population (Schultz & Moore, 1984).

It is interesting to note that, in this study, the social support measures all correlate more highly with loneliness than with depression. This is especially true for males. It appears that, for males, lack of family support is most closely related to loneliness; for females, lack of support from friends is most closely related to loneliness. This supports the findings of Bragg (1979) as cited in Morelli (1984) who found that loneliness was related to social aspects of life, such as low initiation of contact with friends. It must be noted, however, that such correlations do not imply causality.

In terms of absolute levels of the variables under investigation, males in this sample had generally higher levels of life stress, loneliness, and depression, lower self-esteem, and less social support from family and friends. Some research on aging (e.g., Levy, Derogatis, Gallagher, & Gatz, 1980) has reported that women had higher levels than men on similar measures. The apparent discrepancies in the literature point to the necessity

of continued research on depression and its correlates to include gender and age as variables in analyzing data. Analysis of variance yielded no significant gender by marital status interaction on any of the dependent variables (CES-D, UCLA, SRE, S-E, MSPSS-1, MSPSS-2, and MSPSS-3). Greenblatt and Chien (1983) reported that those who are separated or never married have the highest depression scores. In this study, marital status was not a significant source of variation for the CES-D or the UCLA. Marital status was a significant source of variation, however, for the MSPSS-1 and MSPSS-2. Those who had been married but had no current spouse reported lower levels of support from a significant other and from family. It is interesting to note that those living with a spouse reported less support from family than those who had never married.

Conclusions

The subjects in this study showed some depressive symptomatology as revealed by CES-D mean scores of 13.5 for males and 13.4 for females. These scores, while well above the mean scores of 9 for males over age 55 and 11 for females over 55 as reported by Murrell, Himmelfarb, and Wright (1983), did, however, fall into a normal range. The females in this sample were not significantly more depressed than males, contrary to much of the literature on depression (e.g., Weissman & Klerman, 1977). Rather, this study supported the notion that after age 55, men begin to approach the depression ratio of women, and that the incidence of depression for both men

and women age 70 or more may be significantly less than at age 50 (Srole & Fischer, 1980). It is concluded, therefore, that depression may not be a major problem for this sample of rural elderly men and women.

This study showed that higher depression is associated with greater loneliness and lower self-esteem. The correlations for both males and females were highly significant ($p < .001$); however, the correlations on both variables were higher for males. Males in this study were significantly lonelier than females ($p < .004$). In addition, this combined sample was lonelier than a similar, albeit slightly younger, sample from South Carolina (Schultz & Moore, 1984). This finding may be somewhat surprising, given that nearly 73% of the males were living with a spouse, while less than 39% of the women were living with a spouse. It appears that having a spouse is no guarantee that one will not experience loneliness.

Having noted the relationship of loneliness to depression and the fact that the depression scores fell within a normal range, one may ask whether these results may be considered problematic. The 1974 NCOA survey (Harris, 1974) indicated that 61% of the American public who were between the ages of 18 and 65 thought that loneliness was a "very serious concern" for persons over age 65. Interestingly, however, only 12% of those actually over age 65 indicated that they thought loneliness was a "very serious problem" for them (Mullins & McNicholas, 1987). It may be that researchers, as well as the general public, have expectations concerning depression and

loneliness in the elderly which are not necessarily congruent with the experience of that age group. It is entirely possible that the experience of loneliness and depression is not intolerable or devastating, or even seen as problematic, by these subjects. In order to assess the subjective experience of these constructs, in-depth interviews with those who had the highest CES-D and UCLA scores should be conducted. There may well be differences in how males and females perceive events which researchers consider problematic, e.g., retirement or ill health.

Because "the mental health system appears to have adopted a deficit model of aging" (Rodeheaver & Datan, 1988, p. 651), and because women may be seen to be in greater jeopardy for psychological distress due to poverty, widowhood, and family caregiving (Rodeheaver & Datan, 1988), the primary impetus for this study to consider gender came from a feminist perspective.

Gilligan (1982), in her study of women's moral development, wrote the following:

In view of the evidence that women perceive and construe social reality differently from men and that these differences center around experiences of attachment and separation, life transitions that invariably engage these experiences can be expected to involve women in a distinctive way (p. 171).

It is interesting to note that the results of this study yielded data which also seem to demand further research into the constructs of loneliness, self-esteem, and social support as they are experienced by males. It may be that, as some research has indicated (Kaplan, 1986), males are more devastated by loss of employment than by other types of loss, and that their experience of loneliness and low self-esteem largely reflected this loss. It may also be that this sample, in which the males were older than the females, reflected the notion that health problems and physical decline associated with aging have a more powerful psychological impact upon men than they do upon women (Hale & Cochran, 1986). This explanation would seem to fit the male vulnerability model discussed earlier (Gaultieri & Hicks, 1985).

The 1974 NCOA survey (Harris, 1975) revealed increasing loneliness with advancing age for women, but not for men. That finding was not supported by this study. When age was considered as an independent variable, supplemental findings did not reveal significant age differences on the UCLA scale scores. However, men over 80 years of age and women 76-80 years of age were both significantly more depressed (as measured by the CES-D) than the younger age groups. These findings tend to lend support to the assertion that depression and loneliness are indeed separate and distinct constructs.

In order of greater to lesser social support, males listed Significant Other, Family, and Friends. Women, on the other hand, list Family, Significant

Other, and Friends in order of importance. Since more women than men were widowed in this study, one might expect them to be more lonely. It may be, however, that women are able to seek out the support they need from other family members and friends better than men. If, as Gilligan (1982) suggests, women find meaning of life in relationships, and old age brings an end to many of those relationships, then one might expect women to suffer depression and despair as a result. This sample of women may have found other outlets for their need to express care and connectedness when a significant other, family, or friends are no longer available.

Loneliness and depression do not appear to be related to the presence of a spouse, since 73% of the male sample were living with their spouse, while only 39% of the females were living with theirs. Nor are loneliness and depression related to having regular visits with children or to having a satisfactory relationship with those children. This supports the literature which finds no significant relationship between the emotional well-being of the elderly and the frequency of their interaction with adult children (Blau, 1981). Mullins and McNicholas (1987) have suggested that such findings may indicate that the elderly desire social contact with peers and desire the availability of contact with adult children, but not necessarily the actual contact.

The search for a relationship of marital status and gender by marital status interaction to depression was largely unproductive. There was a relationship of marital status to the MSPSS-1, a measure of social support

from Significant Other, and on the MSPSS-2, social support from Family.

These are largely logical results, however: those living with a spouse indicated greater support from Significant Other; the never married indicated greater support from Family than those living with spouse or those having no current spouse. There were no gender by marital status interactions on any of the inventories. It may be that research into marital status relationships, including the present one, have not asked the right questions. The quality and meaning of the relationship, for example, may be of more interest than the fact of it.

Most research into the marital status issue collapsed categories such that "married" and "not married" were the two variables. This study, while providing for six categories, collapsed them into three for statistical purposes: (1) married and living with spouse; (2) married, but no longer living with spouse (separated, widowed, divorced); and (3) never married. It should be noted that this sample had very few subjects who were divorced or married more than once. A larger sample of that population might yield finer marital status differences.

Although not a major focus of this study, it does appear that use of medications may be a factor of interest in the study of depression in the elderly. It is well known that antihypertensive drugs are most likely to produce depression in the elderly (Klerman, 1983). In this study, more women (30.6%) took antihypertensive medication than did men (17.1%). Other drugs which may produce depression are those taken for heart

conditions and cancer, both of which were more used by men (24.4%) than women (15.6%) in this study. Thus it appears that the drugs and the diseases which the drugs are used to treat may both produce depression or depressive symptoms. To cloud the picture even further, Ostfeld (1983), in a 10 year longitudinal study, determined that depressed elderly persons are more at risk for ill health and mortality. In light of these confusing findings, it seems apparent that ongoing research into the use of medication and depression in the elderly is warranted.

Finally, it is possible that the results of this study underrepresent both the level and incidence of depression among the general population of elderly. This population includes many who are home-bound or institutionalized and for whom ill health and use of medications may be even more significant factors than they were for the sample used for this study.

Limitations

The following limitations were inherent in this study:

1. The researcher assumed that the self-reported information gathered from the questionnaires reflected accurate information concerning the psychological condition of the subjects.
2. The subjects for this study were elderly men and women from a largely rural area in a midwestern state. The results of this study, therefore, can be generalized only to the population from which the sample is drawn.

3. The Multidimensional Scale of Perceived Social Support (MSPSS) has not been adequately tested for use with the elderly.

4. The questionnaire method of data collection may have been too confusing or difficult for some subjects, as evidenced by the nearly 30% unusable returns.

Recommendations

The results of this study indicated that depression in the well-elderly male was most strongly related to loneliness, poor health, and low self-esteem. For females, depression was most strongly related to loneliness, low self-esteem, and the use of medications. In addition, marital status did not appear to be significantly related to depression or the other personality and demographic variables. Finally, no significant gender by marital status interaction on depression and the other inventory scales was found. In light of these findings, the following recommendations are made concerning future research.

1. An ongoing attempt should be made to tighten the depression construct as it applies to the elderly. It is suggested, for example, that all somatic symptoms be removed from depression inventories used with the elderly, since physical conditions may easily confound the measure.

2. Since Andersen (1989) found that the UCLA Loneliness Scale contained trait factors, it may be that depression, too, is less a mood disorder than a personality trait construct. Further research into the state/trait nature of

depression among the elderly should be conducted. To accomplish this, longitudinal cohort studies at particularly sensitive points in the life-span might be conducted.

3. Although we may assume that health deteriorates with age, this study does not differentiate between those with recently identified health issues and those who may have suffered chronic health problems for many years. Research into how that variable may affect depression would be useful. It is recommended that such studies focus upon how the elderly person perceives the problem, rather than upon simply the fact of it.

4. To further investigate the interaction of gender and marital status effect on depression, a study using a larger sample of elderly who are divorced and those who have been married more than one time is suggested. In addition, such studies could include data reflecting the quality and meaning of previous marriages.

5. Although this population of elderly was not available to this researcher, marital status research begun now must also include those who cohabit without marriage, as well as the gay/lesbian community.

6. It is further recommended that research among the rural elderly be continued. It is likely that much of the epidemiologic research conducted in large urban centers may not be generalizable to the rural population. As the rural community continues to age, this research may be especially vital.

7. It is recommended also that future research with the elderly consider a reevaluation of the use of questionnaires as data sources. Elderly populations appear relatively unsophisticated in the completion of questionnaires. The format may be confusing, and much valuable data may be lost, since those for whom the task is difficult probably choose not to complete the forms. While questionnaires may be a reasonable starting point for the gathering of information, in-depth interviews should be included as part of the protocol. This population is a rich mine of information, but it must be mined properly lest the contents be inadvertently destroyed.

8. Finally, it is recommended that there be a continuing attempt to develop an integrative model of depression in the elderly. As Breslau and Haug (1983) have indicated, depression in this age group is multifaceted, and any attempt to understand it must take into consideration many areas of vulnerability. Perhaps with the commitment of time and resources, researchers will develop a model which will serve all age groups as we seek to understand, prevent, and treat the ubiquitous, elusive concept called depression.

APPENDICES

APPENDIX A
CONSENT FORM

Information and Consent Form

You are invited to participate in a study of some of the factors which make our senior years enjoyable or difficult. We are especially interested in differences between men and women in their experience of this time of life.

You are being asked to participate as a member of a Senior Citizens' Center in this state. You will be asked to spend about 20 minutes answering questions on a number of issues. There are no right or wrong answers to the questions; we are only interested in how you honestly feel about the statement(s) you read. When you have completed all the forms in the packet, your job will be done. There will be no further follow-up or other contacts made with you.

There is little discomfort or risk involved in your participation in this study. Your answers will be strictly anonymous. You will not place your name on the study forms. Your signature on this form will indicate only your willingness to participate in the study. Published results of the study will not reveal anyone's identification.

You are free to choose not to participate in the study; however, your help would be greatly appreciated. If you choose not to participate in the study, we ask that you return this form unsigned, as well as the packet you have been given. Your decision not to participate will in no way affect your standing in this organization.

If you have any questions concerning this study, you may call the investigator at 701-696-2319.

Thank you for your time and help! Please read the statement below and sign your name and today's date.

I have read the above information and willingly agree to participate in this study, the purpose of which was explained to me by the investigator, Virginia Schwalm.

(your signature)

(date)

APPENDIX B
DEMOGRAPHICS

PERSONAL INFORMATION

DIRECTIONS: Please complete all of the following questions as accurately as possible.

AGE: (Check you age group) **PERSONAL LOSS:** (Check any losses you have

- | | |
|----------------------------------|--|
| <input type="checkbox"/> 55-60 | <input type="checkbox"/> experienced during the past 6 months) |
| <input type="checkbox"/> 61-65 | <input type="checkbox"/> Death of a close family member other than |
| <input type="checkbox"/> 66-70 | <input type="checkbox"/> Death of a spouse |
| <input type="checkbox"/> 71-75 | <input type="checkbox"/> Death of a close friend |
| <input type="checkbox"/> 76-80 | |
| <input type="checkbox"/> 81-85 | |
| <input type="checkbox"/> over 85 | |

EMPLOYMENT: (Check the one that describes you best)

- not retired and employed full-time
- not retired and employed part-time
- retired and no longer employed
- retired, but employed part-time
- never employed

EDUCATION: (Check the highest level attained)

- less than high school diploma
- graduated high school
- some training and/or college after high school
- graduated college or university
- post-graduate work

MONTHLY INCOME: (Check your present monthly income from all sources)

- \$500 or less
- \$501 - \$1000
- \$1001 - \$2000
- more than \$2000

HEALTH: (Check the word which best describes your state of health)

- excellent
- good
- fair
- poor

MEDICATIONS: (For which of these ailments are you taking medication regularly?)

- arthritis/rheumatism
- high blood pressure
- trouble sleeping
- heart trouble
- cancer
- nerves
- stomach trouble
- other

MARITAL STATUS: (Please check your present status)

- married only once and living with first and only spouse
- married only once and widowed
- married only once and divorced
- married more than once, living with present spouse
- married more than once, now divorced or widowed
- never married

GENDER:

 male female

CHILDREN:

How many children did you have? ____

How many children are still living? ____

FOR THE NEXT TWO QUESTIONS, CIRCLE 'YES' OR 'NO'Do you see or talk to any of your children more than once a week? YES NO

Would you say that your relationship with your children is satisfactory? YES NO

APPENDIX C
INSTRUMENTS

CES-D

DIRECTIONS: Circle the number for each statement which best describes how often you felt or behaved this way - DURING THE PAST WEEK.

DURING THE PAST WEEK:		Rarely or None of the Time	Some or a Little of the Time	Occasionally or a Moderate Amount of Time	Most or All of the Time
		(Less than <u>1 Day</u>)	(<u>1-2 Days</u>)	(<u>3-4 Days</u>)	(<u>5-7 Days</u>)
1.	I was bothered by things that usually don't bother me.....	0	1	2	3
2.	I did not feel like eating; my appetite was poor.....	0	1	2	3
3.	I felt that I could not shake off the blues even with help from my family or friends.....	0	1	2	3
4.	I felt that I was just as good as other people.....	0	1	2	3
5.	I had trouble keeping my mind on what I was doing..	0	1	2	3
6.	I felt depressed.....	0	1	2	3
7.	I felt that everything I did was an effort.....	0	1	2	3
8.	I felt hopeful about the future.....	0	1	2	3
9.	I thought my life had been a failure.....	0	1	2	3
10.	I felt fearful.....	0	1	2	3
11.	My sleep was restless.....	0	1	2	3
12.	I was happy.....	0	1	2	3
13.	I talked less than usual.....	0	1	2	3
14.	I felt lonely.....	0	1	2	2

	Rarely or None of the Time (Less than 1 Day)	Some or a Little of the Time (1-2 Days)	Occasionally or a Moderate Amount of Time (3-4 Days)	Most or All of the Time (5-7 Days)
15. People were unfriendly.....	0	1	2	3
16. I enjoyed life.....	0	1	2	3
17. I had crying spells.....	0	1	2	3
18. I felt sad.....	0	1	2	3
19. I felt that people dislike me.....	0	1	2	3
20. I could not get "going".....	0	1	2	2

UCLA

DIRECTIONS: Indicate how often you feel the way described in each of the following statements. Circle only one number for each.

		<u>Never</u>	<u>Rarely</u>	<u>Sometimes</u>	<u>Often</u>
1.	I feel in tune with the people around me.	1	2	3	4
2.	I lack companionship.	1	2	3	4
3.	There is no one I can turn to.	1	2	3	4
4.	I do not feel alone.	1	2	3	4
5.	I feel part of a group of friends.	1	2	3	4
6.	I have a lot in common with the people around me.	1	2	3	4
7.	I am no longer close to anyone.	1	2	3	4
8.	My interests and ideas are not shared by those around me.	1	2	3	4
9.	I am an outgoing person.	1	2	3	4
10.	There are people I feel close to.	1	2	3	4
11.	I feel left out.	1	2	3	4
12.	My social relationships are superficial.	1	2	3	4
13.	No one really knows me well.	1	2	3	4
14.	I feel isolated from others.	1	2	3	4

		<u>Never</u>	<u>Rarely</u>	<u>Sometimes</u>	<u>Often</u>
15.	I can find companionship when I want it.	1	2	3	4
16.	There are people who really understand me.	1	2	3	4
17.	I am unhappy being so withdrawn.	1	2	3	4
18.	People are around me but not with me.	1	2	3	4
19.	There are people I can talk to.	1	2	3	4
20.	There are people I can turn to.	1	2	3	4

MSPSS

DIRECTIONS: After each statement, circle the number which best describes how you feel about that statement. The choices will range from strongly agree to strongly disagree.

		<u>Strongly Agree</u>	<u>Agree</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
1.	There is a special person who is around when I am in need.	1	2	3	4
2.	There is a special person with whom I can share my joys and sorrows.....	1	2	3	4
3.	My family really tries to help me.....	1	2	3	4
4.	I get the emotional support I need from my family.....	1	2	3	4
5.	I have a special person who is a real source of comfort to me.....	1	2	3	4
6.	My friends really try to help me.....	1	2	3	4
7.	I can count on my friends when things go wrong.....	1	2	3	4
8.	I can talk about my problems with my family.....	1	2	3	4
9.	I have friends with whom I can share my joys and sorrows.....	1	2	3	4
10.	There is a special person in my life who cares about my feelings.....	1	2	3	4
11.	My family is willing to help me make decisions.....	1	2	3	4
12.	I can talk about my problems with my friends.....	1	2	3	4

S-E

DIRECTIONS: Please circle the number in the column which best describes how you feel about the statement.

		<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>
1.	I feel that I'm a person of worth, at least on an equal basis with others.....	1	2	3	4
2.	I feel that I have a number of good qualities.....	1	2	3	4
3.	All in all, I am inclined to feel that I am a failure.....	1	2	3	4
4.	I am able to do things as well as most other people.....	1	2	3	4
5.	I feel I do not have much to be proud of.....	1	2	3	4
6.	I take a positive attitude toward myself.....	1	2	3	4
7.	On the whole, I am satisfied with myself.....	1	2	3	4
8.	I wish I could have more respect for myself.....	1	2	3	4
9.	I certainly feel useless at times.....	1	2	3	4
10.	At times I think I am no good at all.....	1	2	3	4

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