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**Health-seeking resources and adaptive functioning in depressed
and nondepressed adults**

Zauszniewski, Jaclene Annette, Ph.D.

Case Western Reserve University (Health Sciences), 1992

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**HEALTH-SEEKING RESOURCES AND
ADAPTIVE FUNCTIONING IN
DEPRESSED AND NONDEPRESSED ADULTS**

by

JACLENE ANNETTE ZAUSZNIEWSKI

Submitted in partial fulfillment of the requirements
for the Degree of Doctor of Philosophy

**Frances Payne Bolton School of Nursing
CASE WESTERN RESERVE UNIVERSITY**

May 1992

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Jaceline Bernette Zausen

HEALTH-SEEKING RESOURCES AND ADAPTIVE FUNCTIONING IN DEPRESSED AND NONDEPRESSED ADULTS

Abstract

by

JACLENE ANNETTE ZAUSZNIEWSKI

Depression continues to be a significant clinical problem presented to psychiatric-mental health nurses. Nursing interventions enhancing health-seeking resources in depressed clients would be particularly useful in assisting them toward more productive, healthy lifestyles. However, development of such interventions should be based on the establishment of significant relationships among health-seeking resources, intervening factors, and adaptive functioning. This study examined social interest and learned resourcefulness as health-seeking resources and their relationship to depressive symptoms, negative personal beliefs (worthlessness, powerlessness, hopelessness), and adaptive functioning in 63 depressed inpatients and 63 nondepressed individuals living in the community.

Schlotfeldt's health-seeking model provided the guiding theoretical framework for examining relationships among the variables of interest. A comparative survey design was used to contrast depressed and nondepressed adults on social interest, learned resourcefulness, negative personal beliefs, depressive symptoms, and adaptive functioning. Statistical analyses included correlations, multiple regression, and multivariate analysis of variance. Five instruments were administered: Social Interest Scale, Self-Control Schedule, Beck Depression Inventory, Cognitive Triad Index, and Community Living Skills Scale. Demographic data were collected to describe the depressed and nondepressed groups.

Findings indicated the two groups were significantly different on all measures except social interest. For both groups, higher scores on instruments measuring health-seeking resources were correlated with lower scores on negative personal beliefs and depressive symptoms and higher scores on adaptive functioning. For both groups, worthlessness emerged as a significant predictor of depressive symptoms while powerlessness and hopelessness did not. Absence of depressive symptoms emerged as a significant predictor of adaptive functioning for nondepressed persons. Learned resourcefulness emerged as a significant predictor of adaptive functioning in the depressed group.

Depressed subjects scoring high in learned resourcefulness and high in worthlessness, powerlessness, or hopelessness had higher adaptive functioning scores than those low in learned resourcefulness. Nondepressed subjects scoring high in learned resourcefulness and high in hopelessness had higher adaptive functioning scores than those with low learned resourcefulness scores. Study results support Schlotfeldt's health-seeking model. This study yields information important for the development of future psychiatric nursing interventions with depressed adults.

DEDICATION

This work is dedicated in memory of my loving father,

DANIEL S. ZAUSZNIEWSKI,

. . . If he only knew he was my hero

. . . He is the wind beneath my wings.

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PREFACE

There are three essentials to achieve anything worthwhile:

First, hard work;

Second, stick-to-itiveness;

And third, common sense.

(Thomas Alva Edison)

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CHAPTER ONE

Background and Significance

Depression continues to be a substantial clinical problem presented to psychiatric-mental health nurses. The only mental disorder with an associated morbidity due to suicide, depression requires new perspectives in nursing care particularly in at-risk populations. It is estimated that 15% to 30% of the population of the United States is affected by depression each year (Heitzman & McColgin, 1989). This accounts for 75% of all psychiatric admissions, or 400,000 patients annually (Heitzman & McColgin, 1989). Recent research findings indicate that persons aged 25 to 44 are at highest risk for depression (Regier, Hirshfield, Goodwin, Burke, Lazar, & Judd, 1988). Many cases of depression are left untreated or undertreated leading to repeat hospitalization or, even worse, tragic death by suicide (Regier, et al, 1988). In addition, it is estimated that the annual cost to the nation for the treatment of depressed persons is more than \$16 billion (Regier, et al, 1988). Treating depressed individuals presents a unique challenge to psychiatric nurses. Nursing interventions directed toward promoting health and optimal functioning in depressed adults are needed.

Regier, et al (1988) suggested that inadequate care currently provided to depressed patients results from a lack of understanding or misunderstanding of depression. Accordingly, it is imperative that psychiatric mental health nurses acquire a sound understanding of clinical depression (Heitzman & McColgin, 1989). Schlotfeldt's (1975) health seeking model provides a framework for examining relationships among phenomena hypothesized to be associated with depression. The determination of significant relationships among these phenomena will yield important information by identifying the focus and type of nursing intervention best suited for treatment of depressed adults.

The significance of this study lies in its potential contribution to the advancement of the discipline of nursing, composed of: theory, practice, and research. The interdependence among these dimensions provides the structure for the discipline of nursing (Conant, 1967; Dickoff, James, & Wiedenbach, 1968). In general, the significance of empirical nursing research lies in its potential for theory generation and development, validation of nursing interventions, and improvement in nursing practice (Schlotfeldt, 1971).

Problem

Nursing interventions which enhance the health-seeking resources of depressed clients may be particularly useful in assisting such individuals toward more productive and healthy lifestyles. The identification of specific nursing interventions can be derived from Schlotfeldt's (1975) health-seeking model following the analysis of the relationships among concepts hypothesized to be associated with clinical depression. Within Schlotfeldt's (1975) health seeking model, learned resourcefulness, social interest, and negative personal beliefs can be examined in relation to adaptive functioning in depressed and nondepressed adults. Although each of these concepts have been examined individually in relation to depression, they have not been studied together in previous research with depressed and nondepressed adults.

According to Schlotfeldt's (1975) model, the primary focus of nursing activity is the stimulation of health seeking behaviors within the person. Learned resourcefulness is an acquired behavioral repertoire of self-controlling skills which minimizes or eliminates potentially disturbing effects of certain internal processes (thoughts, feelings, sensations, impulses) on the performance of daily activities (Rosenbaum, 1983). The cognitive skills comprising learned resourcefulness are acquired through experience, observation, and formal or informal instruction (Rosenbaum, 1983). Therefore, it is

believed that learned resourcefulness can be taught to persons currently experiencing depression as well as those at-risk for depression.

Recent nursing researchers have identified a significant relationship between learned resourcefulness and quality of life (Hinds, 1990; Braden, 1990). Based on their findings, these researchers suggested the need for nursing interventions to enhance learned resourcefulness in cardiology and oncology patients (Hinds, 1990; Braden, 1990). However, the relationship between learned resourcefulness and adaptive functioning in depressed and nondepressed persons has not been examined.

Schlotfeldt's (1975) model specifies that nursing strategies may be needed to compensate for the person's inherent health-seeking mechanisms to preserve a state of health. Social interest exists as an innate potential for showing concern for and valuing others (Adler, 1964). Social interest militates against feelings of powerlessness, hopelessness, and threat to self-esteem (Leak & Williams, 1989) and fosters courageous and constructive efforts to cope with tasks of life (Adler, 1964). As an innate potentiality, social interest needs to be consciously developed or learned within the environment (Adler, 1964). The relationship between social interest and adaptive functioning in depressed and nondepressed adults remains to be investigated.

In Schlotfeldt's (1975) health-seeking model, intervening variables are factors that may impede or enhance the attainment of the health goal. Although nursing activities may be targeted toward minimizing the negative effects of intervening factors, nursing interventions are primarily directed toward enhancing the health-seeking assets of the person (Glazer & Pressler, 1989). Negative personal beliefs are dysfunctional cognitions in which one holds a negative view of self, world, and future (Beck, 1967). These three negative views are manifested in the states of worthlessness, powerlessness, and hopelessness, respectively.

Though Schlotfeldt's (1975) model favors health-seeking assets over intervening factors as the focus of nursing strategies, psychiatric nurses continue to employ interventions that build self-esteem (Crouch & Stroub, 1983; Goldberg & Stanitis, 1977), promote patient autonomy and control (Drevdahl, 1989), and instill hope (Limandri & Boyle, 1978; Miller, 1985). Nursing research studies linking worthlessness, powerlessness, and hopelessness to adaptive functioning are absent from the literature. A study of the relationships between each of the negative personal beliefs (worthlessness, powerlessness, and hopelessness) and adaptive functioning in depressed and nondepressed adults may provide theoretical support for the validation of current nursing interventions.

According to Schlotfeldt's (1975) model, nursing strategies include a variety of modalities such as assessing, compensating, sustaining, supporting, guiding, teaching, and motivating (Glazer & Pressler, 1989). Using these modalities, nurses stimulate or compensate for their client's health-seeking assets (Schlotfeldt, 1975). In addition, nursing strategies may be useful in affecting intervening factors which may enhance or impede one's attainment of health (Schlotfeldt, 1975). Nursing interventions that enhance such health-seeking resources as innate social interest and learned resourcefulness would be particularly useful in assisting depressed persons toward more productive and healthy lifestyles. This study examined differences in health-seeking resources and adaptive functioning of depressed and nondepressed persons. Results from the study yield information important for the development of future psychiatric nursing interventions with depressed adults.

Purpose

The purpose of this investigation was to examine differences in selected health-seeking resources, negative personal beliefs, and adaptive functioning in depressed and nondepressed adults. More specifically, this study was designed to describe relationships

among social interest, learned resourcefulness, worthlessness, powerlessness, hopelessness, depressive symptoms, and adaptive functioning in depressed and nondepressed subjects. In addition, this study compared two groups of subjects (depressed and nondepressed adults) on the same seven variables. For this study, depressed subjects included individuals currently hospitalized for treatment of clinical depression. Nondepressed subjects were individuals with no past or present history of clinical depression.

Theoretical Framework

Schlotfeldt's (1975) model of health-seeking behavior provided the guiding theoretical framework for this study. Within this framework, Schlotfeldt identified the following major concepts: person, health-seeking behaviors, health-seeking mechanisms, intervening factors, health, nursing, and nursing practice (Glazer & Pressler, 1989). According to Schlotfeldt (1975), the person is a biophysical, affective, cognitive, interpersonal, and valuing being who possesses certain health assets, including health-seeking behaviors and health-seeking mechanisms (Glazer & Pressler, 1989). In this study, the concept of person included depressed and nondepressed adults. Schlotfeldt's (1975) health-seeking model incorporates health-seeking assets of individuals which include health-seeking mechanisms and health-seeking behaviors. Health-seeking mechanisms represent inherent phenomena that may be physiological, psychological, or sociological (Glazer & Pressler, 1989). Examples of health-seeking mechanisms include: fever and the inflammatory response (physiological), anxiety and the fight/flight reaction (psychological), gregariousness and curiosity (sociological). In this study, the sociological health-seeking mechanism of social interest was examined in relation to the intervening factors comprised of negative personal beliefs and depressive symptoms and the health goal of adaptive functioning.

Health-seeking behaviors include a range of acquired physiological, psychological,

social, cultural, institutional, philosophic, and spiritual activities which are essential in achieving optimal health (Glazer & Pressler, 1989). Examples of health-seeking behaviors include: exercise and proper nutrition (physiological), relaxation techniques and imagery (psychological), seeking social support and community resources (sociological), use of folk remedies and traditions (cultural), seeking health care, medication (institutional), goal setting and maintaining a purpose in life (philosophical), using prayer or meditation (spiritual).

In this study, learned resourcefulness was viewed as a health-seeking behavior acquired through observation, experience, or instruction (Rosenbaum, 1983). Rosenbaum's theory of learned resourcefulness (1980a; 1983) postulates the human potential for acquiring a behavioral repertoire of resourcefulness that facilitates or enables effective coping with environmental and cognitive factors presumed to cause depression (Beck, 1973) resulting in the continued performance of daily activities. Accordingly, this study examined the relationship between learned resourcefulness, intervening factors including the negative personal beliefs and depressive symptoms, and the health goal of adaptive functioning.

Schlotfeldt (1975) specified intervening factors with her health-seeking model which included development and decline, environmental factors, educational and economic resources, beliefs, and pathology-related factors such as illness, injury, diagnosis, and medical treatment (Glazer & Pressler, 1989). In general, Schlotfeldt (1975) claimed that intervening factors included intrapersonal, interpersonal, and extrapersonal variables within the person's experience that may enhance or impede the attainment of optimal health (Glazer & Pressler, 1989). This study included variables that represent three categories of intervening factors identified by Schlotfeldt (1975): personal beliefs, pathology-related factors, and social resources.

The first category, personal beliefs, was represented by three cognitive factors related to depression. Beck's (1973) cognitive theory of depression describes the "cognitive triad" that includes a negative view of oneself (worthlessness), a negative view of the world (powerlessness), and a negative view of the future (hopelessness). These three cognitive elements of depression represent negative personal beliefs within Schlotfeldt's (1975) model. Depressive symptoms exemplify pathology-related factors within Schlotfeldt's (1975) model. Finally, educational and economic resources were examined in this study. These resources represented another category of intervening factors within Schlotfeldt's (1975) model.

Schlotfeldt's health-seeking model defines health as a goal of the individual (Glazer & Pressler, 1989). Schlotfeldt (1975) conceptualizes health as a dynamic state that may be inferred from one's level of physical and psychosocial functioning (Glazer & Pressler, 1989). In this study, the adaptive functioning of the person was the outcome variable of interest. Adaptive functioning is defined as the ability of an individual to assume responsibility for performing daily activities in a psychologically stable and socially appropriate manner that is representative of mental health. Adaptive functioning includes the ability of the person to engage in self-care activities and perform effectively in social roles.

According to Schlotfeldt's (1975) health-seeking model, nursing strategies include a variety of modalities such as assessing, compensating, sustaining, supporting, guiding, teaching, and motivating (Glazer & Pressler, 1989). Using these modalities, nurses stimulate or compensate for their client's health-seeking assets (Schlotfeldt, 1975). In addition, nursing strategies may be useful in affecting intervening factors which may enhance or impede one's attainment of health. Although the usefulness or effectiveness of specific nursing interventions were not examined in this study, the determination of

significant relationships among the identified phenomena yielded important information regarding the focus and type of nursing intervention best suited for treatment of depressed adults.

In summary, Schlotfeldt's (1975) health-seeking model provided the guiding theoretical framework for examining relationships among phenomena of interest to psychiatric nurses for the development of effective nursing interventions for adults with depressive illness (Figure 1). Relevant concepts included negative personal beliefs (worthlessness, powerlessness, and hopelessness) which were viewed as intervening factors that may impede the attainment of health goals. For instance, these concepts mediated between such health-seeking resources as social interest and learned resourcefulness and the performance of daily activities or functions indicative of adaptive functioning, the identified health goal. Thus, Schlotfeldt's (1975) health-seeking model provided a predictive theoretical framework amenable to testing the direction and strength of relationships among selected health-seeking resources, relevant intervening factors, and adaptive functioning in depressed and nondepressed adults.

Figure 1. Organizing framework for the study derived from Schlotfeldt's (1975) health-seeking model.

Theoretical-Conceptual-Empirical Structure.

Health-Seeking Resources. The construct, health-seeking resources, was defined as certain inherent or acquired personal characteristics that individuals employ in the quest for optimal health (Glazer & Pressler, 1989). Health-seeking resources included health-seeking mechanisms and health-seeking behaviors (1975). Whereas health-seeking mechanisms were inherent physiological, psychological, or sociological characteristics, health-seeking behaviors represented a range of acquired physiological, psychological, social, cultural, institutional, philosophic, or spiritual activity of the person that are necessary in achieving health (Glazer & Pressler, 1989). At the conceptual level, two concepts were identified: social interest and learned resourcefulness.

Social interest was defined as a sociological health-seeking mechanism which describes an individual's innate potential for showing concern for others and thereby valuing others (Adler, 1964). Learned resourcefulness was defined as a psychological health-seeking behavior which consists of a compendium of acquired cognitive skills that minimize or eliminate the disturbing effects that certain internal processes (i.e. cognitions, emotions, sensations) may have on the performance of daily activities (Rosenbaum, 1983).

Hypothesized relationships between health-seeking resources and intervening factors were derived from Schlotfeldt's (1975) health-seeking model. Adler's (1964) theory of individual psychology supports the relationship between social interest and each negative personal belief (worthlessness, powerlessness, hopelessness) by postulating that innate social responsiveness militates against feelings of powerlessness, hopelessness, and threat to self-esteem (Leak & Williams, 1989). In addition, Rosenbaum's (1983) theory of learned resourcefulness supports the relationship between learned resourcefulness and each negative personal belief (worthlessness, powerlessness, hopelessness) by postulating that highly resourceful individuals will be less affected by disturbing thoughts or feelings

(Rosenbaum, 1983).

In this study, both health-seeking resources, social interest and learned resourcefulness, were expected to correlate negatively with worthlessness, powerlessness, and hopelessness. That is, higher scores on instruments measuring social interest and learned resourcefulness were expected to correlate with lower scores on instruments measuring worthlessness, powerlessness, or hopelessness. In addition, higher social interest and learned resourcefulness scores were expected to be associated with lower scores on the instrument measuring depressive symptoms.

Hypothesized relationships between health-seeking resources and attainment of the health goal, adaptive functioning were derived from Schlotfeldt's (1975) health-seeking model. Adler's (1964) theory of individual psychology supports the relationship between social interest and adaptive functioning by postulating that innate social responsiveness fosters courageous and constructive efforts to cope with life tasks (Leak & Williams, 1989). In addition, Rosenbaum's (1983) theory of learned resourcefulness supports the relationship between learned resourcefulness and adaptive functioning by postulating that learned resourcefulness minimizes or eliminates the potentially disturbing effects that certain thoughts or feelings may have on the performance of daily activities (Rosenbaum, 1983).

In this study, both health-seeking resources, social interest and learned resourcefulness, were expected to correlate positively with adaptive functioning. That is, higher scores on instruments measuring social interest and learned resourcefulness were expected to correlate with higher scores in adaptive functioning.

Intervening Factors. At the construct level, intervening factors were intrapersonal, interpersonal, or extrapersonal variables within the person's experience that facilitate or interfere with achievement of health goals (Glazer & Pressler, 1989). Intervening factors

mediated between health-seeking resources and health. Examples included: personal beliefs, social resources, and pathology-related factors (Schlotfeldt, 1975). At the conceptual level, elements of the "cognitive triad" of depression (Beck, 1973) were identified as negative personal beliefs. Negative personal beliefs included the negative views of self (worthlessness), the world (powerlessness), and the future (hopelessness).

Worthlessness was the state in which one experiences a negative change in the way he feels, thinks, or views himself. These beliefs may be reflected in a disturbance in body image, self-esteem, or personal identity (Carpenito, 1985). Powerlessness was the state in which one perceives a lack of personal control over certain events or situations (Carpenito, 1985). Hopelessness was reflected in the subjective state in which one sees limited or no alternatives or personal choices available and is unable to mobilize energy on his own behalf (Gordon, 1987). Beck's (1973) cognitive theory of depression supports the relationship between negative personal beliefs and depressive symptoms by postulating that specific cognitive distortions (negative personal beliefs) precipitate emotional, cognitive, physical and motivational symptoms indicative of clinical depression (Beck, 1973). In this study, worthlessness, powerlessness, and hopelessness were expected to be negatively related to adaptive functioning. Accordingly, higher scores on instruments measuring worthlessness, powerlessness, or hopelessness were expected to be correlated with higher scores on the depressive symptom scale.

At the conceptual level, depressive symptoms were defined as specific physical, emotional, and motivational indicators of the depth and seriousness of depression (Beck, 1973). Depressive symptoms were viewed as a pathology-related factors within the context of Schlotfeldt's (1975) health-seeking model. In this study, increased depressive symptoms were postulated to be negatively related to adaptive functioning. Therefore, higher scores on the depressive symptoms scale were expected to be correlated with lower

scores on the instrument measuring adaptive functioning.

Health Goal. The construct, health goal, was defined as a dynamic state of individuals that represents all of one's existence at a specific moment in time (Glazer & Pressler, 1989). Schlotfeldt (1975) asserted that the health of the individual may be inferred from his level of physical and psychosocial functioning. At the conceptual level, adaptive functioning was the ability of an individual to assume responsibility for performing daily activities in a psychologically stable and socially appropriate manner that is representative of mental health. In this study, adaptive functioning included the individual's perception of his ability to perform self-care activities and function appropriately and effectively in social roles.

Assumptions

Several assumptions supported the guiding theoretical framework for this research study. These assumptions included:

1. Human beings possess both inherent and acquired capabilities which can be nurtured, supported, and actualized through guided learning.
2. Human beings seek wholeness and optimal health.
3. Though several factors may account for the etiology of depression, including biological, situational, and environmental, a distinct cognitive component accompanies depression.
4. Depression is a clinical syndrome rather than a mood state or collection of symptoms.
5. Thoughts and feelings of worthlessness, powerlessness, and hopelessness are indicators of cognitive distortions which characterize depression.
6. Specific cognitive distortions precipitate physical, emotional, and motivational symptoms of depression.

motivational symptoms of depression.

7. Social interest is an innate tendency for humans to desire social contacts and affiliation with others; Man is a social being.
8. Social interest is an innate potentiality that may be developed or learned within the environment.
9. Learned resourcefulness is conceptualized as a personal characteristic learned through interactions with others, personal experience, modeling, and formal or informal instruction.
10. Learned resourcefulness comprises a compendium of cognitive-behavioral strategies for mediating internally stressful processes, including thoughts and feelings, and facilitating or enabling effective coping as evidenced by continued performance of daily functions.

Research Questions

This research study addressed the following research questions:

1. What is the relationship between selected health-seeking resources (social interest and learned resourcefulness), negative personal beliefs (worthlessness, powerlessness, hopelessness), depressive symptoms and adaptive functioning in depressed and nondepressed adults?

According to Adler (1964), lack of social interest is more apt to foster feelings of powerlessness, hopelessness, and to threaten self-esteem. In addition, Adler (1964) hypothesized that social interest is required to solve the three fundamental tasks of life: friendship, occupation, and love. Although relationships among these variables have been studied with nondepressed subjects, the relationship among them have not been investigated in depressed adults. Moreover, Adler (1964) believed that a deficit in social interest is a major factor in the incidence of mental depression. However, this proposition

has not been subjected to systematic investigation in depressed and nondepressed individuals.

Although Rosenbaum (1983) hypothesized highly resourceful individuals are able to minimize or eliminate disturbing effects of certain internal processes, including cognitions and emotions related to depression, research examining the relationship between learned resourcefulness and the negative personal beliefs associated with clinical depression is lacking. In addition, inconsistent findings regarding the relationship between learned resourcefulness and severity of depression have been reported (Martin & Clark, 1985; MacLachlan, 1985; Simons, Lustman, Wetzel, & Murphy, 1985). Finally, Rosenbaum (1983) hypothesized highly resourceful persons will continue to perform daily functions despite the presence of distressing thoughts and feelings. Researchers have not examined the relationship between learned resourcefulness and adaptive functioning.

2. Of the selected health-seeking resources (social interest and learned resourcefulness) and intervening factors (three negative personal beliefs and depressive symptoms), which is most predictive of adaptive functioning in depressed and nondepressed adults?

Schlottfeldt's (1975) health-seeking model proposes that health-seeking mechanisms and behaviors are positively related to the health goal. Social interest (health-seeking mechanism) and learned resourcefulness (health-seeking behavior) have not been studied together in relation to adaptive functioning. Beck's (1973) cognitive theory of depression postulates a direct correlation between negative cognitions involving negative views of self (worthlessness), the world (powerlessness), and the future (hopelessness) and depressive symptoms. However, worthlessness, powerlessness, and hopelessness have not been examined as predictor variables for depressive symptoms. In addition, social interest, learned resourcefulness, and depressive symptoms have not been studied as predictor

variables for adaptive functioning.

3. What are the differences in health-seeking resources (social interest and learned resourcefulness), negative personal beliefs (worthlessness, powerlessness, hopelessness), depressive symptoms, and adaptive functioning among depressed and nondepressed persons?

Research contrasting depressed and nondepressed individuals on these variables is absent from nursing and related literature.

4. What are the interaction effects of each of the health-seeking resources (social interest and learned resourcefulness) and each of the negative personal beliefs (worthlessness, powerlessness, hopelessness) on adaptive functioning in depressed and nondepressed persons?

Adler (1964) postulated that lack of social interest is apt to foster feelings of powerlessness, threat to self-esteem, and relative hopelessness. In addition, social interest is believed to be necessary in successfully solving the fundamental tasks of life (Adler, 1964). Though Adler (1964) did not propose the existence of interaction effects among these variables, the possibility of interaction effects remains to be explored. Rosenbaum's (1983) theory of learned resourcefulness postulates the ability of highly resourceful individuals to function in daily activities despite potentially disturbing internal processes. Researchers have not investigated interaction effects of specific internal processes (i.e. cognitions) and learned resourcefulness. In this study, worthlessness, powerlessness, and hopelessness, represented the internal processes to be examined.

Hypotheses

The following hypotheses were investigated:

1. In both depressed and nondepressed persons, higher scores on instruments measuring health-seeking resources will be correlated with lower scores

on instruments measuring negative personal beliefs and higher scores in adaptive functioning.

- a. Higher social interest scores will correlate with lower scores in worthlessness, powerlessness, hopelessness, and depressive symptoms and higher scores in adaptive functioning.
 - b. Higher learned resourcefulness scores will correlate with lower scores in worthlessness, powerlessness, hopelessness, and depressive symptoms and higher scores in adaptive functioning.
2. In both depressed and nondepressed adults, health-seeking resources (social interest and learned resourcefulness) will be more predictive of adaptive functioning than intervening factors (worthlessness, powerlessness, hopelessness, and depressive symptoms).
 - a. Hopelessness will be the most significant predictor of depressive symptoms when compared to worthlessness or powerlessness.
 - b. Both social interest and learned resourcefulness will be more predictive of adaptive functioning than depressive symptoms.
3. Depressed individuals will have lower social interest and learned resourcefulness scores, higher scores on depressive symptoms, worthlessness, powerlessness, and hopelessness, and lower adaptive functioning scores than nondepressed adults.
4. Subjects with high scores on instruments measuring health-seeking resources in the presence of high scores on negative personal belief indices, will have higher scores in adaptive functioning than those with low scores on instruments measuring health-seeking resources.
 - a. Subjects scoring high in social interest and worthlessness,

powerlessness, or hopelessness, will have higher adaptive functioning scores than those with low social interest scores.

- b. Subjects scoring high in learned resourcefulness and worthlessness, powerlessness, or hopelessness, will have higher adaptive functioning scores than their less resourceful counterparts.

CHAPTER TWO

Introduction

Health promotion is the predominant focus of theoretical frameworks developed by nurses (i.e. Neuman, 1982; Newman, 1979; Schlotfeldt, 1975). Accordingly, nursing interventions are directed toward assisting clients to develop resources that maintain or enhance well-being, self-actualization or optimal functioning (Pender, 1984). The resources available to humans include health assets, which may be inherent or acquired (Schlotfeldt, 1975). Therefore, the goal of professional nursing practice is to assess and enhance health status, health assets, and health potentials of humans (Glazer & Pressler, 1989). Schlotfeldt (1975) claimed nurses focus on the person's health, particularly his strengths, rather than on problems or pathology.

The promotion of mental health in persons faced with emotional or psychological disturbance is the primary responsibility of psychiatric mental health nurses. However, working with depressed clients presents a unique challenge. The development of effective nursing interventions to assist such persons to achieve optimal psychosocial functioning remains a priority for psychiatric mental health nurses interested in providing quality care to clients. By focusing on the strengths and assets of clients experiencing clinical depression, psychiatric mental health nurses will promote mental health and prevent future episodes of depression. The identification of specific nursing interventions will be particularly useful in assisting depressed individuals toward more productive and healthy lifestyles. The identification of specific nursing interventions can be derived from Schlotfeldt's (1975) health-seeking model following an analysis of the relationships among concepts hypothesized to be associated with clinical depression.

This chapter provides an integrative review of theoretical and empirical literature describing the concepts of interest and the interrelationships among them. In this study,

two health-seeking resources were examined within the context of Schlotfeldt's (1975) health-seeking model. According to Schlotfeldt (1975), health-seeking resources may be inherent mechanisms or acquired behaviors. This study identifies social interest as a health-seeking mechanism and learned resourcefulness as a health-seeking behavior. These health-seeking resources were hypothesized to be related to negative personal beliefs, depressive symptoms, and adaptive functioning. In this chapter, relevant theories of social interest (Adler, 1964) and learned resourcefulness (Rosenbaum, 1983) will be explicated. In addition, empirical literature relating these concepts to negative personal beliefs (worthlessness, powerlessness, and hopelessness), depressive symptoms, and adaptive functioning will be reviewed.

Next, concepts representing intervening factors in Schlotfeldt's (1975) health-seeking model will be discussed. Following a description of the concept of depression, Beck's (1973) cognitive theory of depression will be explicated. Beck's (1973) theory provides an explanation for the existence of negative personal beliefs (worthlessness, powerlessness, hopelessness) and their relationship to depressive symptoms. Worthlessness, powerlessness, hopelessness, and depressive symptoms represent intervening factors in Schlotfeldt's (1975) health-seeking model. Review of empirical literature relating these variables to two and adaptive functioning will follow. Finally, adaptive functioning, which is indicative of the health goal in Schlotfeldt's (1975) health-seeking model, will be described. Theoretical and empirical literature relating adaptive functioning and its relevance for study will be reviewed. This chapter will conclude with the specification of the independent, dependent, and control variables for the present study.

Health-seeking resources

Social Interest Theory. According to Adler (1964), social interest is inborn: humans are social creatures by nature, not by habit. Humans are motivated by this innate

social interest which influences the subordination of private gain to public welfare (Adler, 1964). In addition, social interest consists of an innate predisposition which may not appear spontaneously, but can be brought to fruition by guidance and training (Adler, 1964). Traits expressive of social interest include: friendliness, empathy, cooperation, tolerance, respectfulness, consideration, and altruism (Adler, 1964).

The concept of social interest comprises three dimensions: thinking, feeling, and acting (O'Connell, 1965). Concerning cognitive processes, Adler (1964) emphasized the importance of the individual developing an empathic understanding of others. Also, social interest was viewed as essential to common sense (Adler, 1964). The feeling aspect of social interest is evident in references to a positive attitude toward others, concern for their welfare, and the discussion of true sympathy as the purest expression of social interest (Adler, 1964). It is equally clear that overt behavior is the crucial test of a person's social interest. The latter involves behavior directed toward contributing to the welfare of mankind (Adler, 1964).

Adler (1964) postulated that all problems in life can be reduced to three major tasks: social relations, work, and love. Successful coping with the major and pervasive challenges presented by the life tasks requires social interest (Adler, 1964). Any difficulty in managing one of the three tasks of life tends to affect the management of the other life tasks (Adler, 1964). Accordingly, Adler (1964) maintained that social interest is required for successfully and effectively confronting the problems of life and for mitigating destructive feelings of inferiority, insecurity, or low self-esteem. Thus, individuals with higher levels of social interest are more secure and better able to adapt in meeting the demands of life (Adler, 1964). Adler (1964) proposed that deficits in social interest involve the substitution of an act of desperation (self-centered activity) for an act of cooperation (other-directed activity). Adler (1964) contended that desperation is brought

about by losses or setbacks related to the three tasks of life. Therefore, depression, melancholia, and suicidal feelings may result from deficiencies in social interest (Adler, 1964).

Adler's (1964) theory of social interest seems particularly well-suited to the study of health-seeking resources in depressed and nondepressed persons. According to this theory, it may be postulated that individuals with high social interest are less depressed than those with deficits in social interest. In addition, it may be hypothesized that persons with high social interest are able to overcome the potentially destructive influences of certain thoughts and feelings associated with depression (i.e. worthlessness, powerlessness, and hopelessness) by focusing on others rather than on themselves. As a result, persons with high social interest demonstrate greater social adjustment as indicated by the ability to manage the tasks of daily life. Adler's (1964) theory of social interest suggests that dimensions comprising social interest consist of empathy, cooperation, and altruism. This study of health-seeking resources investigated social interest as an innate sociological health-seeking mechanism and its potential for ameliorating the potentially disturbing effects that depressed thoughts and feelings may have on the performance of daily activities.

Empirical Studies of Social Interest. Review of literature revealed that empirical studies of social interest have been restricted to the field of psychology. Utilizing the theoretical framework proposed by Adler (1964), research studies have utilized social interest as an independent, mediating or dependent variable. According to Adler (1964), social interest is an innate interest in and concern for others which involves cognitive, affective, and behavioral dimensions. These dimensions, including understanding, identification (cognitive), empathy, sympathy (affective), cooperation and altruism (behavioral), are employed by individuals in order to minimize or eliminate potentially

destructive feelings of inferiority, insecurity, low self-esteem, or alienation and to successfully and effectively cope with the tasks of life (Adler, 1964). Accordingly, social interest has been identified as an antecedent variable to psychosocial adjustment (Crandall & Lehman, 1977; Crandall, 1980) and an intervening variable between life stress and personal adjustment (Crandall, 1984).

Crandall (1984) described the concept of social interest as a moderator of life stress. In this empirical study, the concept of social interest was defined as the valuing and being interested in and caring about things that go beyond the self (Crandall, 1984). Social interest was measured using two measures of social interest, the Social Interest Scale (SIS) developed by Crandall (1975) and the Social Interest Index (SII) developed by Greever, Tseng, & Friedland (1973). Both of these instruments have been used as measures of social interest in empirical research (Crandall & Putnam, 1980; Crandall & Biaggio, 1984). Life stresses represented psychological disturbances mediated by the social interest (Crandall, 1984). Personal adjustment was conceptualized as constructive attempts to cope with life tasks (Adler, 1964) which was influenced by the individual's social interest (Crandall, 1984). In this study, social interest was studied as a mediating variable between depressive thoughts and feelings and functional performance of daily activities as well as a predictor variable for the latter.

Studies of Social Interest and Depression. The relationship between social interest and depression has been described in two research studies (Crandall, 1981; Crandall, 1984). However, the relationship between the two variables is described as correlational with no specified direction of causality between them. Although Adler (1964) hypothesized that persons with high social interest are better equipped to cope with the major tasks of life, namely work, love, and social relations. Thus, these individuals would demonstrate better personal adjustment. Social interest is conceived as a key factor in the

relationship between the person's mental health and their adjustment to life tasks (Adler, 1964). Both studies conducted by Crandall (1981; 1984) regard social interest as an antecedent variable to depression.

In a correlational study, Crandall (1981) studied 133 undergraduate psychology students. These subjects were recruited volunteers who received course credit for their participation in this study (Crandall, 1981). Social interest was measured by the SIS (Crandall, 1975). Severity of depression was measured by the Beck Depression Inventory (BDI) developed by Beck (1967). Consistent with Adler's (1964) theory of social interest, individuals with high social interest are able to overcome depressive thoughts and feelings and will be less depressed than those lacking social interest. Accordingly, in Crandall's (1981) study, it was hypothesized that social interest would be negatively correlated with severity of depression. Results revealed a significant negative correlation between social interest and severity of depression (Crandall, 1981). This study illustrated the negative relationship between social interest and severity of depression, as a measure of psychological adjustment.

In another study conducted by Crandall (1984), the relationship between social interest and the presence of depression was investigated in a sample of 87 undergraduate psychology students who were grouped into high and low social interest groups according to their scores on the SIS (Crandall, 1975). Whereas the low social interest group consisted of 42 subjects, the high social interest group included 45 subjects (Crandall, 1984). In this study, depression was measured by the Multiple Affect Adjective Check List (MAACL) developed by Zuckerman & Lubin (1965). Consistent with Adler's (1964) theory of social interest, Crandall (1984) hypothesized that social interest would moderate the effects of depression only in the low social interest group. Results revealed a significant positive correlation between social interest and depression in the low social interest group.

However, in the high social interest group, a weak negative correlation between social interest and depression was reported. Therefore, the negative relationship between social interest and depression was partially supported by this study (Crandall, 1984).

Studies of Social Interest and Negative Personal Beliefs. Research studies linking social interest with each of the three negative personal beliefs (worthlessness, powerlessness, and hopelessness) will be reviewed in the following sections. These three negative personal beliefs reflect the negative "cognitive triad" described by Beck (1967). Beck's cognitive theory of depression (1973) proposes that depression is primarily a result of the tendency to view the self, the world, and the future in a unrealistically negative manner. This tendency towards negative evaluation is rooted in irrational beliefs and cognitive distortions (Beck, 1967). According to Alder (1964), social interest facilitates common sense and other aspects of personal adjustment. Whereas common sense fosters realistic approaches to the major tasks of life, private sense or private intelligence characterizes maladjustment. Irrational beliefs are considered as private intelligence (Forman & Crandall, 1986). Accordingly, an empirical study of the relationship between irrational beliefs and social interest was conducted (Forman & Crandall, 1986).

Forman & Crandall (1986) investigated the relationship between social interest and irrational beliefs in four groups of subjects. The subjects included 28 medical students, 26 psychiatric patients, 17 nuns, and 94 undergraduate students (Forman & Crandall, 1986). Consistent with Alder's (1964) theory of social interest, Forman & Crandall (1986) hypothesized a negative relationship between social interest and irrational beliefs. Social interest was measured by the SIS (Crandall, 1975) and irrational beliefs were measured by the Irrational Beliefs Test (IBT) developed by Jones (1968). Following a series of stepwise regression analyses for each group, Forman & Crandall (1986) reported different patterns of irrational beliefs associated with social interest. However, results supported the

contention that these two variables are negatively correlated.

Studies of Social Interest and Worthlessness. Although research examining the relationship between social interest and worthlessness is absent from nursing and related literature, two empirical studies were conducted to investigate the relationship between social interest and variables conceptually related to worthlessness (i.e. self-esteem and ego defensiveness). Parks (1979) studied the relationship between perceived adjustment and the self-esteem and social interest of adolescents following parental separation or divorce. Crandall & Biaggio (1984) examined the relationship between social interest and ego defensiveness in college undergraduates. These two studies are reviewed in this section.

In a correlational study of social interest and self-esteem in adolescents whose parents were recently separated or divorced, Parks (1979) hypothesized a positive relationship between these variables. Consistent with Adler's (1964) theory of social interest, Parks (1979) believed that deficiencies in social interest were associated with feelings of self-worth and usefulness as one strives to overcome feelings of inferiority by focusing attention on common (societal) rather than private (personal) concerns (Adler, 1964). Results indicated a significant positive correlation between self-esteem and social interest (Parks, 1979).

Crandall & Biaggio (1984) investigated the relationship between social interest and ego defensiveness in a correlational study. The researchers postulated that persons with high social interest were more adaptable and better to meet the demands of life and would be expected to make less use of ego defenses when compared to those with less social interest (Crandall & Biaggio, 1984). Supporting Adler's (1964) theory of social interest, Crandall & Biaggio (1984) contended that persons with low social interest were primarily concerned with protecting self-esteem. Ego defenses protect a threatened self-esteem and aid in avoiding realistic confrontation with the tasks of life (Adler, 1964). Crandall &

Biaggio (1984) reported that although a significant negative relationship existed between social interest and the use of ego defenses in women, no significant relation was evident for male subjects. Noting that a significant relationship was reported for males in prior research (Crandall, 1980), Crandall & Biaggio (1984) suggested further exploration of this relationship in males and females.

Studies of Social Interest and Powerlessness. The relationship between social interest and powerlessness and other related concepts has been investigated in several studies (Leak & Williams, 1989; Hjelle, 1975; Stevick, Dixon, & Willingham, 1980). Whereas the study conducted by Leak & Williams (1989) explored the relationship between social interest and powerlessness, the other studies investigated the relationship between social interest and a related construct, locus of control (Hjelle, 1975; Stevick, Dixon, & Willingham, 1980). According to Rotter (1966), when one perceives that an event or behavior is contingent upon his own behavior or characteristics, this belief is termed internal locus of control. Powerlessness is related to the negative evaluation of the world described by Beck (1967). In addition, powerlessness is the state in which one perceives a lack of personal control over certain events or situations (Carpenito, 1985). Therefore, individuals demonstrating an internal locus of control would not perceive themselves as powerless and would not evaluate the world in a negative way.

In a descriptive correlational study involving two separate samples of college students, Leak & Williams (1989) investigated the relationship between social interest and powerlessness. Subscribing to Adler's (1964) theory of social interest, Leak & Williams (1989) predicted that social interest would be negatively correlated with powerlessness. Adler (1964) claimed that lack of social interest fosters feelings of alienation, relative helplessness, and the belief that the world is a hostile place. For both sample of college students, Leak & Williams (1989) reported significant negative correlations between social

interest and powerlessness in both study samples.

Two studies of the relationship between social interest and locus of control have been published in the literature (Hjelle, 1975; Stevick, Dixon, & Willingham, 1980). In a correlational study of 72 female undergraduate students, Hjelle (1975) confirmed the predicted relationship between high social interest and internal locus of control. The results reported by Hjelle (1975) were corroborated by Stevick, Dixon, & Willingham (1980) who reported a significant positive correlation between social interest and internal locus of control in 125 college students. In both of these studies, social interest was measured by the SIS (Crandall, 1975) and internal locus of control was measured by Rotter's (1966) Internal-External Locus of Control Scale (I-E Scale).

Studies of Social Interest and Hopelessness. The relationship between social interest and hopelessness has been investigated in a research study conducted by Crandall (1981). In a descriptive correlational study of antecedents of social interest, Crandall (1981) examined the relationship between social interest and time orientation. In this study, a sample of 53 college students completed the SIS (Crandall, 1975) and the Time Competence Scale of the Personal Orientation Inventory (POI) developed by Shostrom (1972). In the latter instrument, high scores indicate greater continuity of time zones, less guilt, regret, and resentment about the past, more confidence in the future, and future aspirations that coincide with present goals (Shostrom, 1972). Consistent with Adler's (1964) theory of social interest, Crandall (1981) hypothesized a positive relationship between social interest and time competence.

However, the POI (Shostrom, 1972) includes one item reflecting future orientation which is particularly relevant. The two alternatives for this item were "For me the future often seems hopeless," versus or "For me, the future usually seems hopeful" (Shostrom, 1972). Scoring these alternatives as 0 and 1, respectively, Crandall (1981) reported a

significant positive correlation between social interest, as measured by the SIS (Crandall, 1975) and this item reflecting an optimistic view of the future. Crandall (1981) also reported similar results in a study of 83 college students. In this study, one item from Beck's (1978) Hopelessness Scale was used. The single item analyzed in this second study was to be checked as true or false and stated "I have great faith in the future" (Beck, 1978). Crandall (1981) reported a significant positive relationship between social interest, as measure by the SIS (Crandall, 1975), and this single item, reflecting a positive outlook on the future.

Studies of Social Interest and Adaptive Functioning. The relationship between social interest and adaptive functioning has been examined in several research studies. In these studies, adaptive functioning is explored as personal adjustment. According to Adler (1964), social interest is the primary factor contributing to adjustment which involves active and constructive attempts to cope with problems of life. As mentioned earlier, Adler (1964) believed problems in life involve three basic issues: relationships, work, and love. In addition, Adler (1964) equated adjustment with mental health and described courage and common sense as essential characteristics of a well-adjusted individual. In comparison, adaptive functioning is the ability of an individual to assume responsibility for performing daily activities in a psychologically stable and socially appropriate manner that is indicative of mental health. Adaptive functioning includes one's perception of the ability to perform self-care activities and function appropriately and effectively in social roles.

However, studies of social interest and adjustment have measured adjustment in terms of life satisfaction, positive versus negative affect, purpose in life, absence of psychiatric symptoms, and physical stress symptoms (Crandall, 1980). Accordingly, social interest has been found to correlate significantly with all aforementioned variables except

positive versus negative affect in college students (Crandall, 1980). In older adult subjects, life satisfaction, positive versus negative affect, and purpose in life were positively related to social interest (Crandall, 1980).

In a study conducted by Zarski, West, & Bubenzer (1982), the relationship between social interest and life adjustment was investigated. In this study, social adjustment was measured by the SIS (Crandall, 1975) and life adjustment was measured by the Bell Adjustment Inventory (Bell, 1963). The Bell Adjustment Inventory (BAI) provides five separate measures of personal and social adjustment: home, health, social, emotional, and occupational. This operationalization of adjustment is more similar to adaptive functioning than measurements of adjustment in previously discussed studies. Zarski, et al (1982) studied 308 subjects who represented a variety of educational levels and occupational choices. Following Adler's (1964) theory of social interest, the researchers predicted that high social interest persons would report greater life adjustment than low social interest subjects (Zarski, et al, 1982). The researcher's hypothesis was supported by the data (Zarski, et al, 1982).

Learned Resourcefulness Theory. According to Rosenbaum (1983), individuals acquire throughout life a basic behavioral repertoire which enables them to cope effectively with stressful situations. This behavioral repertoire, which comprises the concept of learned resourcefulness, is learned through conditioning, modeling, experience, and instruction (Rosenbaum, 1983). The repertoire of learned resourcefulness constitutes a compendium of cognitive skills by which an individual controls the potentially disturbing effects that certain internal events, including cognitions, emotions, and sensations, may otherwise have on the performance of daily activities (Rosenbaum, 1983). Self-control of the undesirable effects of internal processes may include the minimization or elimination of the disturbing thoughts, feelings, or impulses, so that the individual may

continue to function at an optimal level (Rosenbaum, 1983).

Rosenbaum (1983) stated learned resourcefulness consisted of a repertoire of cognitive skills which are both verbal and nonverbal. However, he admitted that most of these skills are not amenable to direct behavioral observation and must be assessed through verbal reports or inferred through behaviors exhibited under specific conditions requiring learned resourcefulness, such as exposure to aversive and uncontrollable stimuli (Rosenbaum, 1980b). According to Rosenbaum (1983), specific cognitive skills indicative of learned resourcefulness include: self-instructions to cope with emotional and physiological responses; problem-solving strategies; the ability to delay immediate gratification of needs; and a belief in one's ability to cope effectively with internal processes or stimuli.

Rosenbaum's (1983) theory of learned resourcefulness seems particularly well-suited to the study of health-seeking resources in depressed and nondepressed persons. According to this theory, it may be postulated that highly resourceful individuals are less depressed than less resourceful counterparts. In addition, it may be hypothesized that highly resourceful individuals utilize specific cognitive skills to overcome depressed feelings so that they will be able to function independently and continue daily activities without difficulty. Rosenbaum's (1983) theory of learned resourcefulness suggests that cognitive skills comprising learned resourcefulness consist of self-instructions, problem-solving, delay of gratification and belief in one's ability to cope effectively. This study of health-seeking resources examined learned resourcefulness as a health-seeking behavior and its ability to ameliorate the potentially disturbing effects that depressed thoughts and feelings may have on the ability to function in social roles and engage in self-care activities.

Empirical Studies of Learned Resourcefulness. Resourcefulness has been

described in theoretical literature from the disciplines of education (Pratt, 1985; Simpkins, 1985; Elkins, 1985), nursing (Kadner, 1989; Kane, 1988), organizational behavior (Conyne, 1983), and psychology (Rosenbaum, 1980a; Courey, Feuerstein, & Bush, 1982; Simons, et al, 1985). However, empirical studies of resourcefulness have only been described in the field of psychology. Utilizing the theoretical framework proposed by Rosenbaum (1980a), research studies have identified resourcefulness as either the independent or dependent variable in both laboratory and clinical settings.

According to Rosenbaum (1980a), learned resourcefulness is a collection of cognitive skills which are learned by individuals. These cognitive skills, including use of positive self-statements, problem solving techniques, delay of gratification, and a belief in one's ability to cope effectively, are employed by individuals in order to minimize or eliminate the potentially disturbing effects certain internal processes (i.e. thoughts and feelings) may otherwise have on the performance of daily activities (Rosenbaum, 1983). Though research studies identifying learned resourcefulness as a mediating variable are absent from the literature, Rosenbaum's (1983) theory of learned resourcefulness specifies learned resourcefulness as an intervening variable between internal processes and performance of a target behavior.

Braden (1990) described the concept of enabling skill as a mediating variable between feelings of dependency or uncertainty and self-help. In this empirical study, the concept of enabling skill was defined as the ability of an individual to cope with adversity and was measured by the total score of Rosenbaum's (1980a) Self-Control Schedule (SCS), which has been consistently been used as a measure of learned resourcefulness (i.e. Rosenbaum & Jaffee, 1983; Rosenbaum & Palmon, 1984; Martin & Clark, 1985). Feelings of dependency and uncertainty represented the internal processes mediated by the enabling skill (Braden, 1990). Self-help was conceptualized as the individual's

perceived level of role performance which was influenced by the individual's enabling skill (Braden, 1990). In this study, learned resourcefulness will be studied as a mediating variable between depressive thoughts and feelings and functional performance of daily activities as well as a predictor variable for the latter.

Studies of Learned Resourcefulness and Depression. The relationship between depression and learned resourcefulness has been described in several research studies (i.e. Simons, et al, 1985; Martin & Clark, 1985; MacLachlan, 1985). However, the relationship between the two variables is described as correlational with no specified direction of causality between them. Although Rosenbaum (1983) hypothesized that highly resourceful individuals would not be affected by environmental and cognitive factors that are presumed to cause depression, others have proposed that persons who are depressed may be less resourceful in identifying, developing, and using coping strategies by virtue of their depression (Lewisohn, 1974; Weissman, & Paykel, 1974). Research studies have examined the relationship between depression and learned resourcefulness from both vantage points. Though this study specifies depression and its components as independent variables, three studies describing depression as an outcome or dependent variable will also be reviewed.

Using a quasi-experimental design, Rosenbaum & Palmon (1984) studied 50 epileptic patients who were grouped into three categories according to frequency of seizure activity. The three groups of epileptics were divided into high and low resourcefulness classifications based on their scores on the SCS (Rosenbaum, 1980a). Severity of depression was measured by the BDI (Beck, 1967). Consistent with Rosenbaum's (1983) theory of learned resourcefulness, the presence of epileptic seizures was believed to be the disturbing internal event within the individual (Rosenbaum & Palmon, 1984). Rosenbaum & Palmon (1984) postulated that highly resourceful epileptics

would be less depressed and better able to cope with their disability.

Results indicated highly resourceful epileptics with moderate or low frequency seizures were less depressed and coped better with their disability. However, there was no significant difference in severity of depression reported for epileptic subjects with high frequency seizure activity (Rosenbaum & Palmon, 1984). This study illustrated the role of learned resourcefulness in the minimization or elimination of depression in epileptic subjects.

Fox (1987) examined the relationship between learned resourcefulness and the outcome of a six week cardiac rehabilitation program. Using a quasi-experimental design, 53 middle-aged males with a history of coronary bypass surgery or myocardial infarction were studied. The subjects were divided into high or low resourcefulness based on their scores on the SCS (Rosenbaum, 1980a). Severity of depression was measured by the BDI (Beck, 1967). Consistent with Rosenbaum's (1983) theory of learned resourcefulness, thoughts and feelings related to cardiac status were believed to be the potentially disturbing internal processes within the individual (Fox, 1987). Fox (1987) hypothesized that highly resourceful subjects would be less depressed and show more improvement in cardiac status following the six week cardiac rehabilitation program.

Fox (1987) reported that highly resourceful subjects were less depressed prior to beginning the cardiac rehabilitation program, all subjects became more resourceful during the program, and those low in learned resourcefulness before the program were less depressed after completing the six week program. This study demonstrated the inverse relationship between learned resourcefulness and depression in the presence of coronary disability (Fox, 1987).

Summers (1987) investigated the relationship between severity of depression and learned resourcefulness in 65 elderly patients with osteoarthritic joint disease of the hip

or knee. Using a quasi-experimental, subjects were assigned to three classifications of severity of arthritis (mild, moderate, or severe) based on x-rays. Severity of depression was measured by the BDI (Beck, 1967) and learned resourcefulness was measured by the SCS (Rosenbaum, 1980a). Consistent with Rosenbaum's (1983) theory of learned resourcefulness, pain which accompanies arthritis was believed to be the potentially disturbing internal process within the individual. Summers (1987) postulated that highly resourceful persons with severe arthritis would experience less depression and less functional disability than less resourceful counterparts.

Summers (1987) reported a significant negative correlation between severity of arthritis and learned resourcefulness and between severity of depression and learned resourcefulness. However, severity of arthritis was found to be directly correlated with severity of depression and increased functional disability (Summers, 1987). This study suggested empirical support for proposed relationships among learned resourcefulness, depression and functional disability for persons suffering from osteoarthritic joint disease (Summers, 1987). The relationship between severity of depression as the independent variable and learned resourcefulness has been described in research studies (Simons, et al, 1985; Martin & Clark, 1985; MacLachlan, 1985). Employing Rosenbaum's (1983) theory of learned resourcefulness, these studies identified depressed thoughts and feelings as disturbing internal events and postulated an inverse relationship between depression and learned resourcefulness. In these studies, a total score for learned resourcefulness comprised of the individual's perceived use of positive self-statements, problem solving skills and belief in coping effectiveness, was used to represent the construct of learned resourcefulness.

Three research studies have examined the relationship between depression and learned resourcefulness as independent and dependent variables respectively. Though

results have been reported to be conflicting (MacLachlan, 1985), closer inspection revealed the possibility of methodological errors and erroneous interpretations. In the first study, Simons, et al (1985) hypothesized that the cognitive skills comprising learned resourcefulness played a role in enabling an individual to arrest a depressive episode. These researchers viewed depression as an unpleasant or dysfunctional internal process that affects behavior (Simons, et al, 1985). Accordingly, they conducted a study to investigate the predictive value of variables hypothesized to be related to the response to treatment of depression, including severity of depression and resourcefulness (Simons, et al, 1985).

Employing a quasi-experimental design, 35 moderately depressed outpatients were randomly assigned to either cognitive therapy or pharmacotherapy. The subjects were divided into high and low resourcefulness groups based on their scores on the SCS (Rosenbaum, 1980). Severity of depression was determined by the BDI (Beck, 1967). Simons, et al (1985) reported that there was no significant difference on BDI scores between high and low resourceful groups. However, a tendency for lower scorers (less resourceful subjects) to be more depressed was indicated by the mean BDI scores. It is essential to note that the exclusion criteria for this study eliminated subjects with lower severity of depression (i.e. BDI scores < 20), thus limiting the variance of the sample. Accordingly, it may not be unexpected that the subjects of this study showed no significant difference in terms of learned resourcefulness.

However, Simons, et al (1985) reported that although both cognitive therapy and pharmacotherapy were equally effective in treating depressed patients, the treatments were most effective with patients exhibiting different characteristics. More specifically, those depressed subjects who were more highly resourceful responded better to cognitive therapy, while those who were less resourceful responded better to pharmacotherapy.

Simons, et al (1985) concluded that the skills taught in cognitive therapy capitalized on the pre-existing repertoire of the highly resourceful depressed subjects.

Martin & Clark (1985) conducted a study of 61 college students to examine the relationship between severity of depression and learned resourcefulness. Using a quasi-experimental design, Martin & Clark (1985) divided the sample into high and low resourceful groups based on scores on the SCS (Rosenbaum, 1980a). Severity of depression was measured by the BDI (Beck, 1967). Martin & Clark (1985) reported a weak negative association between severity of depression and learned resourcefulness. However, these researchers argued that this weak association may be a function of limitation of variance in the sample. For example, the reported range of scores on the BDI (Beck, 1967) was 0 to 29, with a possible range of 0 to 63 (Martin & Clark, 1985).

MacLachlan (1985) explored the relationship between severity of depression and learned resourcefulness in his study of 90 volunteers, who were found to be mildly depressed. Using a quasi-experimental design, MacLachlan (1985) divided the sample into high and low resourceful groups based on SCS scores (Rosenbaum, 1980a). Severity of depression was measured by the BDI (Beck, 1967). MacLachlan (1985) reported a significant negative correlation between severity of depression and learned resourcefulness. The BDI scores in this study ranged from 0 to 34, with a possible range of 0 to 63. Thus, the sample variance for this study was slightly better than in previous studies (Simons, et al, 1985; Martin & Clark, 1985).

Studies of Learned Resourcefulness and Negative Personal Beliefs. Research studies directly linking learned resourcefulness with each negative personal belief (worthlessness, powerlessness, and hopelessness) are absent from nursing and related literature. However, Rosenbaum (1980a) examined the relationship between learned resourcefulness and irrational beliefs. Beck (1967) believed the tendency towards negative

evaluation of self, world, and future was rooted in irrational beliefs and cognitive distortions. Rosenbaum (1980a) hypothesized highly resourceful individuals would not hold irrational beliefs as demonstrated by use of positive self-verbalizations, which are rational rather than irrational. In a study of 111 college students, Rosenbaum (1980a) examined the relationship between learned resourcefulness, measured by the SCS (Rosenbaum, 1980a) and irrational beliefs, measured by the IBT (Jones, 1968). Results indicated a significant negative correlation between learned resourcefulness and irrational beliefs (Rosenbaum, 1980a).

Although research examining relationships between each of the negative personal beliefs and learned resourcefulness is lacking, concepts similar to worthlessness and powerlessness have been studied in relation to learned resourcefulness. For example, researchers have examined the relationships between learned resourcefulness and self-esteem (MacLachlan, 1985) and internal locus of control (Richards, 1985; Rosenbaum, 1980a). These studies will be discussed further in the following sections. In addition, epistemic linkages between the cognitive skills comprising learned resourcefulness (positive self-statements, problem-solving, delay of gratification, belief in coping effectiveness) and components of the "cognitive triad" of depression (Beck, 1967) have been established. Several studies have reported significant correlations between negative evaluation of self, world, and future and a variety of response categories reflective of cognitive processes associated with learned resourcefulness (Blaney, Behar, & Head, 1980; Dobson, & Breiter, 1983; Hamilton & Abramson, 1983; Norman, Miller, & Klee, 1983).

Studies of Learned Resourcefulness and Worthlessness. Studies directly relating learned resourcefulness and worthlessness are absent from nursing and related literature. However, research studies have linked cognitive skills comprising learned resourcefulness with the negative view of self described by Beck (1967). For example, research studies

have found that severity of depression is significantly related to feelings of guilt, helplessness, and lowered self-confidence (Cofer & Wittenborn, 1980; Peterson, 1979); less perceived ability to deal with sources of stress (Hammen & DeMayo, 1982); less perceived control and accomplishments (Warren & McEachren, 1983); more negative and less positive self-verbalizations (Missel & Sommer, 1983); judgments of being less self-efficacious in interpersonal functioning (Kanfer & Zeiss, 1983); and the tendency to generalize a single failure to a more generally negative view of other aspects of the self (Carver & Ganellen, 1983). Finally, research studies by Davis & Unruh (1981) and Derry & Kuiper (1981) provided evidence of an organized negative self-schema in long-term depressed patients.

One research study has investigated the relationship between learned resourcefulness and self-esteem (MacLachlan, 1985), a concept representing a negative indicator of worthlessness. In this descriptive correlational study of 90 volunteer adult subjects, MacLachlan (1985) postulated that learned resourcefulness and self-esteem would be positively related. Following Rosenbaum's (1983) theory of learned resourcefulness, these variables were expected to correlate positively (Rosenbaum & Ben-Ari, 1985). Learned resourcefulness was measure by the SCS (Rosenbaum, 1980a) and self-esteem was measured by Bachman & O'Malley's (1977) Self-Esteem Inventory (SEI). MacLachlan (1985) reported that self-esteem correlated highly with learned resourcefulness.

Studies of Learned Resourcefulness and Powerlessness. Research studies directly relating the concepts of learned resourcefulness and powerlessness are absent from nursing and related literature. However, the relationship between powerlessness (measured as a negative view of the world) and two cognitive skills comprising learned resourcefulness has been described. For example, studies relating problem-solving and belief in coping

effectiveness to the negative view of the world in depressed persons have been conducted. Findings indicate depressed individuals cognitively process their task performance and ability to problem solve in a more negative manner (Beck, 1973). Sacco & Hokanson (1978) reported a significant relationship between increased severity of depression and decreased expectations for success resulting in decreased ability to solve anagrams in those subjects as compared to non-depressives. Sacco & Graves (1984) found severity of depression is related to lower self-ratings of problem solving performance.

In addition, studies of depressed persons indicate that they reward themselves less and punish themselves more for their skill task performance (Gotlib, 1981; Lobitz & Post, 1979; Rozensky, Rehm, Pry, & Roth, 1977); underestimate the amount of reinforcement they have received (DeMonbreun & Craighead, 1977; Dobson & Shaw, 1981; Nelson & Craighead, 1977; Wener & Rehm, 1975); recall fewer self-rewards and more self-punishments than is objectively the case (Gotlib, 1981); recall more uncompleted than completed tasks (Johnson, Petzel, Hartney, & Morgan, 1983); recall material of a negatively toned content more easily and readily than material of a more positive nature (Lloyd & Lishman, 1975); and prefer to attend to negative feedback rather than positive feedback about themselves (Roth & Rehm, 1980). These studies provided evidence that cognitive skills comprising learned resourcefulness are negatively related to negative perceptions of experiences in the world indicative of powerlessness.

Finally, research studies have investigated the relationship between learned resourcefulness and internal locus of control (Rosenbaum, 1980a; Richards, 1985), a concept believed to represent the opposite of powerlessness (Carpenito, 1985). In a descriptive correlational study of 262 undergraduate students, Rosenbaum (1980a), predicted a positive relationship between learned resourcefulness, measured by the SCS (Rosenbaum, 1980a) and internal locus of control, measured by the I-E Scale (Rotter,

1966). Rosenbaum (1980a) discovered that more highly resourceful individuals reported more frequent adoption of the internal locus of control as predicted. In a second descriptive correlational study, Richards (1985) studied the association between learned resourcefulness and internal locus of control in 60 undergraduate students. Using the same instruments as those in the previous study (Rosenbaum, 1980a), a statistically significant relationship between learned resourcefulness and internal locus of control was established (Richards, 1985).

Studies of Learned Resourcefulness and Hopelessness. Research studies linking learned resourcefulness and hopelessness are absent from nursing and related literature. However, the expectation for successful coping component of learned resourcefulness has been explored in relation to hopelessness. Lewisohn, Larson, & Munoz (1982) found that depressives rating high in hopelessness have more negative expectancies for events pertaining to self but not to the world. Hopelessness also been related to lower expectancies for achievement and affection (Gurtman, 1981); lower expectations of satisfaction from planned pleasant activities (Sacco & Hokanson, 1978); and lower expectations for success on a problem solving skill task (Lobitz & Post, 1979).

Studies of Learned Resourcefulness and Adaptive Functioning. Learned resourcefulness has been associated with a number of different outcomes which are related to the performance of certain tasks or functions. Although learned resourcefulness has not been directly related to the performance of self-care and social role functions, Rosenbaum (1983) hypothesized that highly resourceful individuals are able to minimize or eliminate the distressing effects that certain internal processes, including thoughts and feelings associated with depression, may have on the performance of daily activities.

Research studies of resourcefulness have described such outcomes as the solution of anagrams in the presence of inescapable noise (Rosenbaum & Jaffee, 1983), solution

of puzzles during success or failure feedback (Rosenbaum & Ben-Ari, 1985), ability to adhere to fluid restrictions between dialyses in patients with end stage renal disease (Rosenbaum & Smira, 1986), and ability to carry out responsibilities aboard a ship without performance deficits despite history of seasickness (Rosenbaum & Rolnick, 1983).

Intervening Factors

Conceptualization of Depression. Depression has been conceptualized as a mood state, a set of symptoms, and a clinical syndrome (Beck, 1973). As a mood state, depression represents a universal human condition. In general, persons of all ages who experience a lowering of mood or transient feelings of sadness claim to be depressed. Accordingly, when one complains of feeling inordinately dejected, hopeless, or unhappy, the term depression is used to indicate this subjective state (Beck, 1973).

The term depression is also used to represent a collection of symptoms, including sadness, reduced ability to experience pleasure, pessimism, inhibition and retardation of action, and a variety of physical complaints. Symptoms of depression have been classified into types: physical, emotional, cognitive, and motivational (Coyne, 1985). In addition, some interpersonal characteristics of depression which are not formal symptoms, are frequent, distinctive, and troublesome enough to warrant attention (Coyne, 1985).

Emotional symptoms of depression may include: sadness, dejection, anxiety, irritability, distress, disappointment, frustration, extreme negativity, overt hostility, intense anger, inability to derive pleasure from previously satisfying activities, and withdrawal from social relationships (Beck, 1973; Coyne, 1985). Cognitive aspects of depression consist of: pessimism, negative self-evaluation, expectation of failure, self-blame, learned helplessness, disturbed thought processes and ability to concentrate, and impaired decision-making (Abramson, Seligman, & Teasdale, 1978; Beck, 1973).

Motivational disturbances associated with depression include: inability to complete

even simple tasks, lack of initiative to perform daily activities, procrastination, avoidance of responsibility, and psychomotor retardation or agitation (Beck, 1973; Coyne, 1985). Physical symptoms of depression may consist of: loss of appetite, sleep disturbances, loss of libido, fatigue, and diffuse aches and pains (Beck, 1973; Coyne, 1985). Finally, interpersonal aspects of depression may include: withdrawal from social activities, increased dependency, acquiescence, dysfunctional communication patterns, and proneness to interpersonal tension and conflict (Coyne, 1985).

As a clinical syndrome, the term depression is usually qualified by an adjective to specify a particular type or form. Clinically, types of depression include reactive depression, agitated depression, and psychotic depression (Beck, 1973). In addition, depression has been classified as endogenous or exogenous which refers specifically to etiological considerations (Gilbert, 1984). Moreover, depression has been distinguished as primary, when not preceded by any other physical or psychiatric disorder and secondary, when preceded by or accompanying other psychiatric or physical disorders (Robins, Munoz, Martin, & Gentry, 1972).

When conceptualized as a specific clinical entity, depression comprises certain attributes and characteristic signs and symptoms, including a specific type of onset, course, duration, and outcome (Beck, 1967). The Diagnostic and Statistical Manual of Mental Disorders (DSM III-R) specifies diagnostic criteria for a number of clinical syndromes indicative of depressive illness. For example, major depressive syndrome is defined by the presence of certain symptoms over a two week period of time which represent a change from previous level of functioning. Symptoms of depression must include either a depressed mood or loss of interest or pleasure. In addition, five of the following symptoms must be present: 1) depressed or irritable mood; 2) markedly diminished interest or pleasure in almost all activities; 3) significant weight changes or

decreased appetite; 4) sleep disturbance; 5) psychomotor agitation or retardation; 6) fatigue or decreased energy; 7) feelings of worthlessness or excessive inappropriate guilt; 8) diminished ability to think or concentrate or indecisiveness; and 9) recurrent thoughts of death or recurrent suicidal ideation with or without a specific plan (American Psychiatric Association, 1987).

In addition, there are other clinical syndromes in which depression is the predominant feature, for example, dysthymia and adjustment disorder with depressed mood (American Psychiatric Association, 1987). Moreover, depression often accompanies personality disorders, substance abuse disorders, alcoholism, and some organic mental disorders (American Psychiatric Association, 1987). Although there are a number of clinical syndromes in which the most prominent feature is depression, salient characteristics of these syndromes may be specified to identify major depression as a clinical entity (Beck, 1973).

Cognitive Theory of Depression. In general, cognitive theories of depression postulate that symptoms of depression are experienced because of disturbances in thinking leading to false beliefs and ideas. Cognitive and behavioral theories of depression are sometimes closely related, especially in cases where thought processes are instrumental in self-reinforcing or self-evaluating activities hypothesized to cause or maintain depression (e.g. Rehm, 1977; Abramson, et al, 1978). Beck's (1973) cognitive theory of depression proposes that depression is primarily a result of the tendency to view the self, the world, and the future in a unrealistically negative manner. This distorted, negative view of self, world, and future is termed the negative "cognitive triad" (Beck, 1967). According to this theory, depressed persons regard themselves as unworthy, incapable, and undesirable. They expect failure, rejection, and dissatisfaction and perceive most experiences as confirming these negative expectations. The major symptoms of a depressive disorder

(affective, behavioral, somatic, and motivational) are viewed as a direct consequence of this negative cognitive set.

A central feature of Beck's (1967) theory is that the depressed individual's negative view is usually a distortion of reality. Idiosyncratic cognitive schemas are proposed as hypothetical structures serving to maintain the depressogenic cognitive triad despite contradictory evidence. Beck (1967) described several common cognitive distortions of depressed persons which reflect the activity of depressogenic cognitive schemas. The depressogenic cognitive schemas represent errors in logical thinking which are considered to be causally related to the depression-prone individual's tendency to interpret events in extreme, negative, categorical, absolute, and judgmental ways and reflect more primitive, immature levels of cognitive processing (Beck, Rush, Shaw, & Emery, 1979).

Arbitrary inference, one common cognitive distortion of depressed persons, involves drawing a conclusion in the absence of evidence or when evidence contradicts the conclusion (Beck, 1967). A second type of cognitive distortion, selective abstraction is the tendency to focus on negative details in a situation and to conceptualize the entire experience on the basis of this negative evaluation (Beck, 1967). Overgeneralization, defined as the tendency to draw a general conclusion on the basis of a single incident and to apply the concept indiscriminately to both related and unrelated situations (Beck, 1967), represents a third common cognitive distortion of depressed persons.

Magnification and minimization represents two additional errors in logical thinking or cognitive distortion of depressed persons. Whereas magnification reflects the tendency to overestimate the significance of an negative event, minimization relates to the tendency to underestimate the significance of positive experiences (Beck, 1967). Another type of cognitive distortion of depressed persons is referred to as personalization, which

involves the tendency to relate external events to oneself without evidence (Beck, 1967). Finally, all-or-none thinking is an example of a common cognitive distortion of depressed individuals. It represents the tendency to think in absolute terms (Beck, 1967).

Beck (1973) postulated that distorted cognitive schema develop early in childhood and render individuals vulnerable to depression when faced with stress. However, the depressogenic cognitive schemas, acquired through early life experiences, remain latent until activated by a precipitating stressor to which the person has become sensitized. Accordingly, Beck (1973) postulated the concept of specific vulnerability, whereby individuals predisposed to depression from prior life experience, may not become depressed if experiences similar to the one to which they were sensitized do not occur. Thus, depression is not an inevitable outcome for those believed to be depression prone (Beck, 1973).

Beck's (1967; 1973) cognitive theory of depression is relevant to the study of health-seeking resources in depressed and nondepressed adults. Beck's (1973) cognitive theory of depression describes the specificity of negative idiosyncratic thinking which replaces objective thought process when the depression prone individual is faced with a certain situation. When this theory is applied to the study of health-seeking resources, it may be hypothesized that although prone to depression, one may utilize social interest or learned resourcefulness in preventing the occurrence of cognitive distortions leading to depression. However, when faced by a situation similar to the one to which the individual was previously sensitized, the individual displays less social interest, becomes less resourceful and expresses cognitive distortions consisting of negative views of the self, the world, and the future (Beck, 1967).

Studies of Depression and Worthlessness. Numerous studies provide evidence that depressed persons view themselves more negatively than nondepressed persons (Carver

& Ganellen, 1983; Frost, Graff, & Becker, 1979; Wilson & Crane, 1980). Measurement of self-esteem provided a direct assessment of this aspect of the "cognitive triad" (Beck, 1973). As predicted, depressed persons scored significantly lower than nondepressed individuals on a variety of measures of self-esteem (Altman, & Wittenborn, 1980; Beck, 1974; Feather & Barber, 1983; Karoly & Ruehlman, 1983; Lewisohn, et al, 1982; Sacco & Hokanson, 1978). Kazdin, French, Unis, Esveltd-Dawson, & Sherick (1983) found a similar relationship between self-esteem and childhood depression.

Studies of Depression and Powerlessness. The second component of the "cognitive triad" (Beck, 1973) is that depressed individuals are prone to view their experience in the world in a negative way. A variety of measures of cognitions about experience have found that severity of depression is significantly correlated with more negative perceptions. Depressed persons view significant others in a more negative manner than do nondepressed persons (Beck, 1973). Specifically, more negative ratings of parents (Blatt, Wein, Chevron, & Quinlan, 1979) and of friends and family (Karoly & Ruehlman, 1983) have been related to severity of depression. Rogers & Forehand (1983) reported that the severity of depression of mothers of clinic referred children was related to perceptions of greater child maladjustment despite the fact that objective raters were unable to distinguish the children of depressed mothers from those of nondepressed mothers on levels of compliance and deviant behavior.

Studies of Depression and Hopelessness. According to Beck's (1973) cognitive model, depressed persons expect failure, dissatisfaction, and indefinite continuation of current difficulties. A number of research studies have provided evidence that negative expectations are related to severity of depression (Gurtman, 1981; Lewisohn, et al, 1982). Several studies have reported depression scores to be significantly related to self-report measures of hopelessness (Beck, 1974; Beck, Kovacs, & Weissman, 1975; Fibel & Hale,

1978; Karoly & Ruehlman, 1983; Layne, Lefton, Walters, & Merry, 1983).

Studies of Depression and Adaptive Functioning. Although Beck (1967) described motivational manifestations that characterize depression, including paralysis of will, avoidance, escapism, withdrawal, and increased dependency, few research studies have addressed the relationship between depression and performance of self-care or social role functions. The relationship between depressive illness and performance of activities of daily living has been described (McRae & Costa, 1988; Umlauf & Frank, 1987; Liberman & Foy, 1983). These studies documented significant negative correlations between increased severity of depression and decreased evidence of self-care activities, including personal care functions related to bathing, dressing, grooming, and eating (McRae & Costa, 1988; Umlauf & Frank, 1987; Liberman & Foy, 1983).

The relationship between depressive symptomatology and social role performance has been more widely researched. Social role functions, including relationships with others and occupational functioning have been associated with depression. Widner & Cadoret (1983) determined that depression was often accompanied by disturbances in social relationships. Dow & Craighead (1987) reported that depressive subjects often described inadequate social relationships. Lunghi (1977) reported clear differences between depressed and nondepressed adults in ratings of real-life and hypothetical social relationships with a tendency toward more negative ratings of depressed subjects. Bloshl (1984) found that a reduction in positive social relationships played a role in the etiology and maintenance of depression. Bothwell & Weissman (1977) found that social impairment of depressed patients persisted well beyond the acute episode, particularly in the areas of marital and close interpersonal relations.

Work performance or occupational functioning has also been found to be related to depression. Bisno & Richardson (1987) reported strong correlations between depression

and decreased work performance in depressed cancer subjects. Shaw & Weekley (1985) described the relationship between depression and work performance involving problem solving tasks. Billings, Cronkite, & Moos (1985) reported a correlation between depression and decreased occupational functioning prior to treatment with notable improvement in occupational performance after twelve months of cognitive therapy. Weissman (1974) has also reported improvement in work performance of depressed subjects as a result of psychotherapy.

Health Goal

Adaptive Functioning. Psychiatric nursing practice is an interpersonal process that strives to promote and maintain behavior which contributes to integrated functioning (Haber, Hoskins, Leach, & Sideleau, 1987; Stuart & Sundeen, 1987). Accordingly, psychiatric nursing practice is concerned with the assessment of the functional status of individuals. Functional status is defined as the ability to carry out the tasks of daily living and to fulfill the challenges of one's social roles and responsibilities (Stuart & Sundeen, 1987). Theoretically, adaptive or healthy functioning is affected by both clinical status and psychological status (Stuart & Sundeen, 1987). Whereas clinical status incorporates the severity of depressive symptoms, psychological status refers to the ability of the individual to be resourceful in minimizing or eliminating the disturbing effects of depressive thoughts or feelings.

Summary

This study examined relationships among social interest, learned resourcefulness, worthlessness, powerlessness, hopelessness, depressive symptoms, and adaptive functioning in depressed and nondepressed adults. Whereas social interest and learned resourcefulness were expected to correlate positively with adaptive functioning, depressive symptoms was expected to correlate negatively with adaptive functioning. Therefore, high scores on

instruments measuring social interest and learned resourcefulness were expected to be associated with high scores in adaptive functioning. Also, high scores on the depressive symptom scale were expected to be associated with low adaptive functioning scores.

In addition, social interest, learned resourcefulness, and depressive symptoms were examined as predictor variables for adaptive functioning in both groups of subjects. Accordingly, social interest, learned resourcefulness, and depressive symptoms existed as the independent variables studied in relation to the dependent variable, adaptive functioning (Table 1).

Table 1. Predictor variables for adaptive functioning.

<u>INDEPENDENT VARIABLES:</u>	<u>Conceptual Definitions</u>	<u>Operationalization</u>
Social Interest:	innate potential for showing concern and valuing others expressed as empathy, friendliness, understanding, altruism, cooperation. (Adler, 1964).	Social Interest Scale (Crandall, 1975)
Learned Resourcefulness:	acquired behavioral repertoire of cognitive skills that minimize / eliminate potentially disturbing effects of internal processes (cognitions) on performance of daily activities (Rosenbaum, 1983).	Self-Control Schedule (Rosenbaum, 1980)
Depressive Symptoms:	collection of specific physical, emotional, and motivational symptoms (Beck, 1973).	Beck Depression Inventory (Beck, 1978)
<u>DEPENDENT VARIABLE:</u>	<u>Conceptual Definition</u>	<u>Operationalization</u>
Adaptive Functioning:	ability to assume responsibility for performing daily activities in a socially appropriate and psychologically stable manner indicative of mental health.	Community Living Skills Scale (Smith & Ford, 1990)

In a separate analysis, the three negative personal beliefs, worthlessness, powerlessness, and hopelessness, represented independent variables studied in relation to depressive symptoms. Accordingly, worthlessness, powerlessness, and hopelessness were examined as predictor variables for depressive symptoms. For this part of the study, depressive symptoms was considered as the dependent variable (Table 2).

Table 2. Predictor variables for depressive symptoms.

<u>INDEPENDENT VARIABLES:</u>	<u>Conceptual Definitions</u>	<u>Operationalization</u>
Worthlessness:	state in which one views himself as useless, reflected in disturbance in body image, self-esteem, or personal identity (Carpenito, 1985).	Cognitive Triad Inventory (Beckham, et al, 1986) Subscale: View of self.
Powerlessness:	state in which one perceives lack of personal control over certain events or situations (Carpenito, 1985).	Cognitive Triad Inventory (Beckham, et al, 1986) Subscale: View of world.
Hopelessness:	state in which one sees limited or no alternatives or personal choices available and is unable to mobilize energy on own behalf (Gordon, 1987).	Cognitive Triad Inventory (Beckham, et al, 1986) Subscale: View of future.
<u>DEPENDENT VARIABLE:</u>	<u>Conceptual Definition</u>	<u>Operationalization</u>
Depressive Symptoms:	collection of specific physical, emotional, and motivational symptoms (Beck, 1973).	Beck Depression Inventory (Beck, 1978)

Finally, depressed and nondepressed subjects were compared on five selected variables. The subject's group represented the independent variable and social interest, learned resourcefulness, negative personal beliefs, depressive symptoms, and adaptive functioning existed as dependent variables in this comparative analysis (Table 3).

Table 3. Comparison of depressed and nondepressed groups on five variables.

<u>VARIABLES:</u>	<u>Conceptual Definitions</u>	<u>Operationalization</u>
Group:	Depressed subjects:	Presently hospitalized for clinical depression.
	Nondepressed subjects:	No past/current history of clinical depression.
Social Interest:	innate potential for showing concern and valuing others expressed as empathy, friendliness, understanding, altruism, cooperation, etc. (Adler, 1964).	Social Interest Scale (Crandall, 1975)
Learned Resourcefulness:	acquired behavioral repertoire of cognitive skills that minimize / eliminate potentially disturbing effects of internal processes (cognitions) on performance of daily activities (Rosenbaum, 1983).	Self-Control Schedule (Rosenbaum, 1980)
Depressive Symptoms:	collection of specific physical, emotional, and motivational symptoms (Beck, 1973).	Beck Depression Inventory (Beck, 1978)
Negative Personal Beliefs:	collection of dysfunctional cognitions, known as the "cognitive triad," (Beck, 1967) in which one views him/ herself as worthless, powerless, or hopeless.	Cognitive Triad Inventory (Beckham, et al, 1986)
Adaptive functioning:	ability to assume responsibility for performing daily activities in a socially appropriate and psychologically stable manner indicative of mental health.	Community Living Skills Scale (Smith & Ford, 1990)

CHAPTER THREE

Introduction

This chapter provides a discussion of the methodological dimensions of the study. Following a complete description of the research design, sampling issues will be discussed in terms of sample specification, inclusion and exclusion criteria, and sample size determination by power analysis. The instruments administered during the study will be addressed, including item description, scoring, interpretation, and psychometric testing. An explanation of the procedures for instrument administration and protection of human subjects is provided. A description of preliminary studies conducted to ascertain clarity and understanding of questionnaire items is included. Finally, a summary of the statistical methods used in the analysis of the research data concludes this chapter.

Design

This study of health-seeking resources and adaptive functioning in depressed and nondepressed adults utilized a cross-sectional survey design which involved selecting a convenience sample of the population of interest and measuring specific phenomena at one point in time (Woods & Catanzaro, 1988). The sample consisted of depressed and nondepressed adults. Depressed subjects included acutely depressed inpatients. Nondepressed subjects comprised adults with no known history of clinical depression. Variables of interest included: health-seeking resources (social interest and learned resourcefulness), depressive symptoms, negative personal beliefs (worthlessness, powerlessness, and hopelessness), and adaptive functioning. The research design included both the correlational and comparative survey approaches.

A descriptive correlational survey design relates multiple variables measured at a single time point from a specified population (Brink & Wood, 1989). In this study, health-seeking resources (social interest and learned resourcefulness) and depressive

symptoms were correlated with adaptive functioning across all subjects. In addition, each of the negative personal beliefs (worthlessness, powerlessness, and hopelessness) were correlated with depressive symptoms across all subjects. Finally, interaction effects of health-seeking resources (social interest and learned resourcefulness) and each of the negative personal beliefs (worthlessness, powerlessness, and hopelessness) in relation to adaptive functioning were investigated during the study.

A comparative survey design contrasts groups of subjects that differ with regard to particular variables at a single point in time (Brink & Wood, 1989). In this study, two groups of subjects were studied: depressed and nondepressed adults. These two groups of subjects were compared on measures of health-seeking resources (social interest and learned resourcefulness), negative personal beliefs (worthlessness, powerlessness, and hopelessness), depressive symptoms, and adaptive functioning.

Sample

Specifying the Sample. Specification of the sample for this study was based on three considerations: 1) problem and purpose of the study; 2) study design; and 3) accessibility of potential participants of interest (Woods & Catanzaro, 1988). To address the problem and purpose of the study, adult subjects with varying levels of severity of depression were recruited. In addition, the target population included adult male and female subjects between the ages of 21 and 65 who represented a variety of racial and ethnic backgrounds. The study design, which included the comparison of two groups, was addressed through the selection of acutely depressed inpatients and nondepressed subjects with no past history of professional treatment for depression (Table 4).

Table 4. Description of the two groups of subjects for the study.

<u>Subject Group</u>	<u>Description</u>
Depressed subjects:	Individuals currently hospitalized for treatment of clinical depression who meet DSM III-R criteria for the diagnosis of major depression, bipolar depression, or dysthymic disorder. Acutely depressed inpatients will comprise this group of subjects.
Nondepressed subjects:	Individuals who have no past or current history of clinical depression which required treatment. Volunteer subjects denying any prior history of hospitalization or treatment for clinical depression will comprise this group of subjects.

The accessibility of potential participants was addressed through the use of a convenience sample in this study. A convenience sample is a nonprobability sample that happens to be available at the time of data collection (Brink & Wood, 1983). Available subjects are simply entered in the study until the desired sample size is reached (Burns & Grove, 1987). Limitations of this method of sampling are related to the decreased ability to generalize findings to other populations and the inability to ensure representativeness of the sample (Woods & Catanzaro, 1988). Advantages of convenience sampling include the minimization of cost, time, and effort (Woods & Catanzaro, 1988).

As described previously, the sample was drawn from two sources. Acutely depressed subjects were recruited from three psychiatric hospital settings. Nondepressed subjects with no history of depression were recruited from community volunteers who respond to flyers or posted advertisements in a variety of public places, i.e. churches, businesses, colleges, hospitals, etc.

Inclusion and Exclusion Criteria. Specification of inclusion and exclusion criteria were essential prior to sample selection (Brink & Wood, 1983). These criteria provided important guidelines for selecting each potential subject (Woods & Catanzaro, 1988).

Typically, inclusion criteria specify necessary characteristics for each subject of the sample (Woods & Catanzaro, 1988). In addition, exclusion of potential subjects was desirable to control or eliminate characteristics that may interfere with the interpretation of the results of the study (Woods & Catanzaro, 1988). Inclusion and exclusion criteria for subjects in this study were specific for each of the two groups.

Inclusion criteria for the acutely depressed group included: 1) subjects were adults, male and female, representing a variety of racial and ethnic backgrounds, between the ages of 21 and 65; 2) subjects were currently receiving professional treatment (hospitalized) for major depression, bipolar depression, or dysthymic disorder; 3) subjects met DSM III-R diagnostic criteria for one of these diagnoses. Exclusion criteria included: 1) individuals with depression related to physical illness or chronic condition; 2) individuals with organic mental disorders (dementia, neurological deficits, etc.) or thought disorders (schizophrenia).

For the nondepressed group without past history of clinical depression, inclusion criteria included: 1) subjects were adults, male and female, representing a variety of racial and ethnic backgrounds, between the ages of 21 and 65; 2) subjects reported no current feelings of depression that comprised the DSM III-R diagnostic criteria for major depression, bipolar disorder, or dysthymic disorder; 3) subjects reported no known history of depression requiring professional treatment; Exclusion criteria included: 1) individuals currently receiving treatment for depression; 2) individuals currently meeting DSM III-R diagnostic criteria for major depression, bipolar depression, or dysthymic disorder; 3) individuals with known physical illness or chronic condition which may be associated with feelings of depression; 4) individuals with organic mental disorders (dementia, neurological deficits, etc.) or thought disorders (schizophrenia).

Sample Size Determination. Determination of sample size depended on the

number and type of variables and method of planned statistical analysis (Cohen, 1988). The most effective method for determining sample size is through power analysis (Cohen, 1988). To determine sample size by power analysis, the significance level (α), population effect size (γ), and power level (one minus β) must be known or estimated (Polit & Hungler, 1987). For this study, significance level was set at the .05 level ($\alpha = .05$) which serves as the convention for the minimum basis for rejecting the null hypothesis in most areas of behavioral science (Cohen, 1988). The power level was set at .80 (power = .80), which serves as the convention in the absence of another basis for choice (Cohen, 1988). The population effect size (γ) depends on the types of variables and statistical test to be performed (Cohen, 1988).

To answer the proposed research questions, this study required four different statistical tests, including Pearson correlations, two-way analysis of variance (ANOVA), multivariate analysis of variance (MANOVA), and multiple regression analysis. In addition, reliability and validity testing of instruments required further statistical analysis. Sample size determination varied with each different statistical test. A complete discussion of sample size determination for this study follows.

In this study, Pearson correlations between pairs of variables were determined. In the absence of any known population effect size between pairs of variables to be studied, an effect size of .40 is generally recommended (Cohen, 1988). Sample size was determined using the table developed by Cohen (1988). Specifying an α of .05, power of .80, and effect size of .40, a sample of 50 subjects was required to detect statistically significant correlation coefficients in this study (Polit & Hungler, 1987).

This study also involved the joint examination of the effects of two independent variables acting together on one dependent variable using two-way ANOVA. Sample size determination for two-way ANOVA involves specification of α , power, effect size,

and degrees of freedom for the variables (Cohen, 1988). For this study, degrees of freedom of the numerator of the F ratio were calculated by multiplying levels of interacting main effects for the interacting variables (Cohen, 1988). Each two-way ANOVA will comprise a 2X2 matrix, yielding 1X1 or 1 degree of freedom. Using the table developed by Cohen (1988), sample size was determined. Effect size (f) was computed by taking the square root of a specified amount of explained error variance (E) associated with the independent variables divided by the error variance (1-E).

Therefore, for this study, significant differences were determined when the amount of the explained variance exceeded a minimal value of 20%, yielding an effect size of .50 (McLaughlin & Marasculio, 1990). Specifying an alpha of .05, power of .80, effect size of .50 and 1 degree of freedom, a sample of 17 subjects was required to detect statistically significant interaction effects in this study (McLaughlin & Marasculio, 1990). This would account for a minimum of 5 subjects for each cell of the 2X2 matrix for each of the two analyses required by research question four.

This study also involved the comparison of two groups of subjects on seven dependent variables using MANOVA. McLaughlin & Marasculio (1990) recommend the use of a sample in which: $N > 10(K + Q)$, where K is the number of treatments or levels and Q is the number of dependent measures. In this case, K equals the number of groups being studied (2) and Q equals the number of dependent variables (7). Therefore, sample size (N) for MANOVA should exceed 10 (2 + 7) or 90 subjects (McLaughlin & Marasculio, 1990).

In addition, this study involved the investigation of the effects of several independent variables on one dependent variable using multiple regression. For multiple regression, the significance level, power, effect size, and number of independent variables were used to calculate the number of subjects needed (Cohen, 1988). Three independent

variables ($u = 3$) were considered in each regression analysis to be performed in this study. The effect size was set at a medium level ($f = .15$) for multiple regression and correlational analysis, which is conventionally used in behavioral sciences research when the actual effect size is unknown (Cohen, 1988). According to McLaughlin & Marasculio (1990), sample size for multiple regression is determined by the formula: $N = n(P + 1)$, where N is the sample size, n equals 5.5 for a specified power level of .80, and P is the number of independent variables. Therefore, for each multiple regression analysis, the sample size equaled $5.5(3 + 1)$ or 22 subjects. Accordingly, a sample size of 22 subjects would allow the determination of statistically significant results for each multiple regression for a power of .80 at an alpha level of .05 for a medium effect size of .15 using 3 independent variables.

Finally, this study included reliability and validity testing of the six instruments which measure the variables of interest. The longest instrument, the Community Living Skills Scale (CLSS) (Smith & Ford, 1990) contains 42 items. The number of items on a questionnaire is frequently used in estimating sample size for psychometric studies (Nunnally, 1978). As a convention, Nunnally (1978) recommends at least 3 subjects per item for conducting reliability studies (Cronbach's alpha) and factor analysis. Accordingly a sample size of at least 126 subjects was required for adequate psychometric testing of instruments in this study.

In conclusion, sample size determination involved the consideration of the number and types of variables and statistical analyses to be performed. Examination of power analyses for each of the statistical tests required for this study indicated recommended sample sizes for each test. Power analysis reveals that 50 subjects are needed for Pearson correlations, 17 for each two-way ANOVA, 90 for MANOVA, 22 for each multiple regression, and 126 for adequate psychometric testing of instruments. Therefore, the use

of 126 subjects in this study, including 63 subjects in each of the two groups, was reasonable, feasible, and manageable.

Instruments

Six instruments were administered to each subject in this study. These instruments include: a demographic questionnaire, Social Interest Scale (SIS) (Crandall, 1975), Self-Control Schedule (SCS) (Rosenbaum, 1980a), Beck Depression Inventory (BDI) (Beck, 1967), Cognitive Triad Inventory (Beckham, et al, 1986), and Community Living Skills Scale (CLSS) (Smith & Ford, 1990). Characteristics of interest, including number of items, format, scoring, and psychometric properties of the instruments measuring the variables of interest will be described individually in this section. In addition, the administration of the selected instruments during this study will be discussed.

Demographic Characteristics. Extraneous variables for this study included the following demographic attributes: age, gender, marital status, educational level, and annual income. This information was obtained by means of an open-ended questionnaire. This form also included the subject identification number and the date of data collection.

Social Interest. Social interest was measured by the Social Interest Scale (SIS) developed by Crandall (1975). The SIS was designed to assess the degree of a person's interest in and concern for others (Crandall, 1981). A second goal was to develop a scale that was relatively uninfluenced by any tendency of the subject to make socially desirable responses (Crandall, 1981). The SIS requires subjects to choose which of two alternative traits they consider to be of more value and importance. Subjects are asked which trait they would rather have rather than which they do have (Crandall, 1981). Each pair includes one trait related to social interest, i.e. helpful, sympathetic, tolerant, and one which is not relevant, i.e. quick-witted, neat, capable (Crandall, 1975). The SIS contains 15 items and is labelled the "Personal Trait Value Scale." The scale also include nine

"buffer" pairs of traits that are not scored. Scores consist of the number of social interest traits chosen and can range from 0 to 15 (Crandall, 1981). The SIS is self-administered and takes about five minutes to complete (Crandall, 1981).

All data on reliability have been obtained from college students. Test-retest reliability was .82 over five weeks and .65 over 14 months (Crandall, 1981). Internal consistency measures include coefficient alpha of .73, estimated by Kuder-Richardson formula 20 (Crandall, 1981). In addition, split-half reliability was .77 using the Spearman-Brown formula (Crandall, 1975). Thus, although the instrument is quite short, its reliability appears adequate for a research instrument (Nunnally, 1978). Criterion validity of the SIS has been established by its relations to cooperative and altruistic behavior ratings, peer ratings, measures of interpersonal attraction, differences between norm groups, and a variety of self-report measures that appear to have a close relationship to social interest (Crandall, 1980; 1981).

In addition, discriminant validity has been established by correlations between SIS scores and other measures in the expected direction (Crandall, 1981). For example, tests of discriminant validity show relative invulnerability of the scale to faking and no relationship to measures of desire for acceptance, extraversion, and intelligence (Crandall, 1981). Evidence of construct validity exists in the relationships of the SIS to measures of stress and adjustment, discrimination between groups believed to differ in social interest, and mean differences between high and low social interest groups on overt behaviors related to social interest, such as cooperation versus competition in a Prisoner's Dilemma situation (Crandall, 1981).

Learned Resourcefulness. The Self-Control Schedule (SCS) developed by Rosenbaum (1980a) was used to measure learned resourcefulness in this study. The SCS consists of 36 likert-type items which use a 6 point scale. The items indicate the degree

to which a particular item represents a characteristic or description of the subject's behavior, ranging from extremely descriptive or very characteristic to extremely nondescriptive or very uncharacteristic of the individual. The scores range from +3 to -3 with no zero point to indicate a neutral response.

Theoretically, the SCS contains four subscales: positive self-instructions, problem solving, delay of gratification, and perceived self-efficacy (Rosenbaum 1980a). However, factor analysis of the SCS resulted in the extraction of six factors: thought control, mood control, impulse control, pain control, planful behavior, and perceived self-efficacy (Redden, Tucker, & Young, 1983). Examination of individual items reveals that the first four factors listed above incorporates those items developed to reflect the use of positive self-instructions. In addition, those items designed to reflect problem solving comprised the factor labelled planful behavior. Items which theoretically reflected perceived self-efficacy comprised the factor labelled perceived self-efficacy. A high composite score, after reversing the direction of scoring for 11 items phrased negatively, is indicative of greater degree of resourcefulness (Rosenbaum, 1980a). The SCS takes approximately 15 minutes to complete (Redden, et al, 1983).

Rosenbaum (1980a) reported a test-retest reliability (over 4 weeks) of .86. Internal consistency estimates ranged from .78 to .84 in six samples of subjects (Rosenbaum, 1980a; Redden, et al, 1983). The SCS was characterized by an acceptable level of internal consistency as determined by item-total scale correlations (Redden, et al, 1983). Correlational analyses of the SCS with other measures (Richards, 1985), including Rotter's Internal-External Locus of Control Scale (1966), the Religious Orientation Scale (Allport & Ross, 1967), and the Manifest Anxiety Scale (Taylor, 1953), demonstrated construct validity of the instrument. Finally, the SCS has been correlated with a variety of criterion measures, including pain tolerance (Rosenbaum, 1980b), performance deficits

(Rosenbaum & Rolnick, 1983), adherence to treatment plan of fluid restriction (Rosenbaum & Smira, 1986), and task performance (Rosenbaum & Ben-Ari, 1985; Rosenbaum & Jaffee, 1983).

Depressive Symptoms. Depressive symptoms were measured by the Beck Depression Inventory (BDI) developed by Beck, Ward, Mendelson, Mock, & Erbaugh (1961). The BDI was clinically derived and designed to measure both attitudes and symptoms which appear to be specific for depression and those which are consistent with descriptions in psychiatric literature (Beck & Beamesderfer, 1974). This 21-item scale was originally intended to be interviewer assisted, but common practice at present is to have the subject complete the instrument in an unassisted self-report manner (Beck, et al., 1961).

Each item of the inventory consists of four self-evaluative statements scored 0 to 3, with increasing scores indicating greater severity of depression. Responses are added to yield a total score, ranging from 0 to 63. One item that assesses weight loss is not scored if the individual indicates that he/she has been attempting to lose weight. BDI scores are generally categorized in the following manner: 0-9 indicates a normal nondepressed state; 10-15 reflects mild depression; 16-23 reflects moderate depression; and 24-63 reflects severe depression (Beck, et al, 1961). The BDI is easy to administer and takes 15 minutes to complete (Beck, et al, 1961).

Extensive examination of the internal consistency of the scale has been reported in the literature. Split-half reliability coefficients have been reported in the range of .58 to .93 (Beck & Beamesderfer, 1974; Gallagher, Nies, & Thompson, 1982; Reynolds & Gould, 1981; Strober, Green, & Carlson, 1981). Item-total correlations ranged from .22 to .86 with the average being .68 (Strober, et al, 1981). Test-retest reliability, although suggested to be a poor evaluative criterion due to the expected fluctuation of symptom

severity during a depressive episode, ranged from .69 to .90 (Gallagher, et al, 1982; Strober, et al, 1981).

In terms of concurrent validity, the BDI has correlated with clinician's ratings of depth of depression in the range of .62 to .77 (Beck, et al, 1961; Bumbery, Oliver, & McClure, 1978; Metcalfe & Goldman, 1965; Nussbaum, Wittig, Hanlon, & Kurland, 1963; Salkind, 1969; Strober, et al, 1981). In addition, correlations with other rating scales of depression, including the Hamilton Rating Scale of Depression (HRSD), Minnesota Multiphasic Personality Inventory - Depression Scale (MMPI-D), Zung Self-rating Depression Scale (SDS), and the Multiple Affect Adjective Checklist (MACL), have been moderate to good (Bloom & Brady, 1968; Burkhart, Gynther, & Fromuth, 1980; Nussbaum, et al, 1963; Schwab, Bialow, & Holzer, 1967; Williams, Barlow, & Agras, 1972; Zung, 1969).

Negative Personal Beliefs. Additional variables of interest for this study include concepts representing the "cognitive triad" identified by Beck (1967). These variables represent negative personal beliefs which are believed to be related to the incidence of depression (Beck, 1967). More specifically, negative views of the self, the world, and the future were measured as worthlessness, powerlessness, and hopelessness. Beckham, et al (1986) developed an instrument to measure positive views of self, world, and future which reflect the opposite dimensions of the cognitive triad conceptualized by Beck (1967). The Cognitive Triad Index (Beckham, et al, 1986) was used to measure views of self, world, and future in this study. However, in order to reflect the concepts of worthlessness, powerlessness, and hopelessness, scores on items were recoded prior to data analysis.

The CTI contains 36 items phrased in both a positive and negative manner (Beckham, et al, 1986). Respondents are asked to rate each item according to what are thinking at the moment of testing a 7 point likert scale ranging from "totally agree" to

"totally disagree" (Beckham, et al, 1986). Items are scored from 1 to 7 from total agreement to total disagreement (Beckham, et al, 1986). High scores represent positive view and low scores indicate negative views on the respective dimensions of view of self, word, and future (Beckham, et al, 1986). A high composite score, after reversing the direction of scoring for 16 items phrased negatively, is indicative of more positive views of self, world, and future (Beckham, et al, 1986). There is a possible range of 70 points for each subscale and 210 for the total scale; six items are not scored (Beckham, et al, 1986).

Reliability for the total scale was reported as .95 (Beckham, et al, 1986), exceeding the recommended criterion level for an estimate of internal consistency (Nunnally, 1978). Criterion validity for the total scale has been established by its high correlation (.77) with the Beck Depression Inventory (Beck, 1961). In addition, criterion validity was evident by the correlation (.79) of the total CTI score with summed scores of subject ratings for views of self, world, and future. Estimates for criterion validity of the CTI exceed the recommended criterion level (Nunnally, 1978). Reliability and validity has also been established for each of the subscales of the CTI (Beckham, et al, 1986). The measurement of each of the negative personal beliefs, (worthlessness, powerlessness, and hopelessness), will be discussed in the following paragraphs.

Worthlessness. Worthlessness was measured by the recoded score for the view of self subscale of the CTI (Beckham, et al, 1986). This subscale consists of 10 likert type items which are scored from total agreement to total disagreement according to the subjects current thinking (Beckham, et al, 1986). Six items are reverse scored. After recoding, higher scores represented a more negative view of self. Reliability has been established with an internal consistency estimate of .91 (Beckham, et al, 1986). In addition, this subscale was found to correlate .69 with subject ratings, .90 with

Rosenberg's Self-Esteem Scale (Rosenberg, 1965), and .77 with five BDI items reflecting negative view of self. Accordingly, these convergent correlations attest to the construct validity of the negative view of self subscale of the CTI (Nunnally, 1978).

Powerlessness. Powerlessness was measured by the recoded score for the view of world subscale of the CTI (Beckham, et al, 1986). This subscale consists of 10 likert type items which are scored from total agreement to total disagreement according to the subjects current thinking (Beckham, et al, 1986). Five items are reverse scored. After recoding, higher scores represented a more negative view of the world. Reliability has been established with an internal consistency estimate of .81 (Beckham, et al, 1986). In addition, this subscale was found to correlate .61 with subject ratings and .72 with three BDI items reflecting negative view of the world. Accordingly, these convergent correlations attest to the construct validity of the negative view of the world subscale of the CTI (Nunnally, 1978).

Hopelessness. Hopelessness was measured by the recoded score for the view of future subscale of the CTI (Beckham, et al, 1986). This subscale consists of 10 likert type items which are scored from total agreement to total disagreement according to the subjects current thinking (Beckham, et al, 1986). Five items are reverse scored. After recoding, higher scores represented a more negative view of the future. Reliability has been established with an internal consistency estimate of .93 (Beckham, et al, 1986). In addition, this subscale was found to correlate .84 with subject ratings, .90 with the Hopelessness Scale (Beck, et al, 1974), and .71 with one BDI item reflecting negative view of the future. Accordingly, these convergent correlations attest to the construct validity of the negative view of the future subscale of the CTI (Nunnally, 1978).

Adaptive Functioning. Adaptive functioning was measured by the Community Living Skills Scale (CLSS) developed by Smith & Ford (1990). This self-rating measure

of functional level was originally developed by a group of former and current mental health service consumers (Smith & Ford, 1990). The CLSS contains four subscales rating personal care, socialization and relationships with others, leisure activities, and vocational skills (Smith & Ford, 1990). Although the CLSS contains 46 items, only those items which are universally applicable was used in this study. In addition, three items measuring relationships with specific family members were condensed into one item. Accordingly, the adapted version of the CLSS for this study consisted of 42 items.

Scale items are phrased in behavioral terms and have four likert type response categories, including "hardly ever," "sometimes," "usually," and "almost always" (Smith & Ford, 1990). Items having a fifth response category labelled "does not apply" were not included in this study. The four response categories are scored from 1 to 4. A high composite score is indicative of greater adaptive functioning (Smith & Ford, 1990). The CLSS takes approximately 15 minutes to complete (Smith & Ford, 1990). Smith & Ford (1990) reported reliability estimates for internal consistency for each of the four subscales. However, an internal consistency estimate of reliability was not reported for the total scale. Subscale values for Cronbach's alpha were: .84 (personal care), .79 (socialization and relationships), .83 (leisure activities), and .79 (vocational skills). These values exceed the recommended criterion level for internal consistency estimates ($>.70$) for an immature scale (Nunnally, 1978).

Concurrent validity was examined by comparison to clinician ratings using the Global Assessment Scale (GAS) (Endicott, Spitzer, Fleiss, & Cohen, 1976). Smith & Ford (1990) reported that only the personal care subscale correlated significantly with GAS ratings (.41). Smith & Ford (1990) claimed these results were not unexpected as Endicott, et al (1976) believed that social, leisure, and vocational skills do not have a great impact on clinician ratings. However, the reported value for the personal care subscale did not

meet the suggested criterion level of $> .70$ (Nunnally, 1978). Smith & Ford (1990) investigated discriminant validity for the CLSS by comparing two groups of subjects known to be different in functional level. A group of psychiatric clients undergoing psychosocial rehabilitation and a group of graduate students were matched on demographic characteristics (Smith & Ford, 1990). Smith & Ford (1990) reported that all four CLSS subscales differentiated the client group from the comparison group with a higher predicted functional level.

Administration of Instruments. Administration of the instruments in a specified order controlled for testing / instrumentation effects. Administration of the instruments in a single session controlled for history effects. In addition, subjects were asked not to discuss items on the instruments with other potential subjects to further control for history effects. Instruments selected for this study were kept as brief as possible, i.e. objective measures with brief responses in order to control for maturation effects, i.e. fatigue.

Procedure

This study used a convenience sample of acutely depressed inpatients and nondepressed subjects with no prior history of depression requiring professional treatment. Following approval from the Institutional Review Boards of Case Western Reserve University and the hospitals selected for the study, subjects for the acutely depressed group were identified. The nondepressed subjects with no prior history of depression were recruited volunteers matched to depressed subjects on sex and age within five years.

Following subject identification, the general purpose of the study was explained to individual subjects and informed consent for participation was obtained. Subjects were assured of confidentiality and that all data would be reported as aggregate. Using a

structured interview format, subjects meeting the inclusion criteria for the two groups were interviewed by the primary investigator.

After collection of demographic information, subjects completed six short questionnaires in a specified order. The study was conducted in a quiet room or office. Sufficient time for completion of questionnaires without interruption was assured to control for mortality effects. In addition, the provision of a stipend for all subjects contributed to the control of mortality effects.

Protection of Human Subjects

Several methods were used to assure the protection of the rights of the subjects involved in the study. Participation was strictly voluntary, with freedom to withdraw at any time. Subjects were informed of the nature of the study before giving written consent for participation. Hospitalized subjects were assured that refusal to participate in this study would not affect their health care. Subjects were told that any questions they have before, during, or after the completion of the questionnaires, would be answered as they arise. There were no known physical, social, or psychological risks to participants. However, it was planned that if subjects were to become uncomfortable or anxious during the interview, it would be terminated.

Confidentiality of subject's responses were maintained throughout the study. Questionnaires contained no identification of the individual and all data are analyzed as aggregate. Subjects have been assigned an identification number to protect anonymity. Only this identification number appeared on the questionnaires, data coding sheets, and computer files. All data were kept in a locked file cabinet and stored in computer files. Data were only accessible to the primary investigator and her consultants.

Preliminary Studies

Preliminary studies were conducted to ascertain clarity and understanding of

questionnaire items. In addition, subjects were observed signs of distraction or fatigue during the 45 minute structured interview while instruments were being completed. Pilot testing of the instruments was conducted on a sample of 10 adult volunteers. These 10 subjects were not included in the actual study. Further psychometric testing of the instruments, including reliability and validity testing was conducted in conjunction with this study. In addition, correlations among the concepts related to depression, i.e. worthlessness, powerlessness, and hopelessness, were to be examined for covariation. It was planned that if these correlations were observed to be high, the development of a cognitive index of depression would be used which reflects measurement of the three variables together.

Data Analysis

Preliminary data analysis included a demographic description of subjects from the two groups using measures of central tendency and variation at the appropriate level of measurement. Descriptive statistics, including frequency distributions, were used to describe the sample in terms of demographic characteristics (age, gender, marital status, educational level, and annual income). Differences between groups in terms of demographic variables were ascertained using t-tests for interval level data and chi-square analysis for nominal data.

Following preliminary data analysis, statistical analysis of the study hypotheses was conducted. Four different statistical techniques were needed to address the research questions. In addition, assumptions underlying each statistical analysis were evaluated to assure they were not violated. Table 5 describes the four major hypotheses that were investigated and the required statistical analyses.

Table 5. Research hypotheses for investigation and required statistical analysis

<u>Hypotheses</u>	<u>Data Analysis</u>
1. In both depressed and nondepressed persons, higher scores on instruments measuring health-seeking resources (social interest and learned resourcefulness) will be correlated with lower scores on instruments measuring negative personal beliefs (worthlessness, powerlessness, hopelessness) and higher adaptive functioning scores.	Pearson correlations
2. In both depressed and nondepressed adults, health-seeking resources (social interest and learned resourcefulness) will be more predictive of adaptive functioning than intervening factors (worthlessness, powerlessness, hopelessness, and depressive symptoms).	Multiple regression
3. Depressed individuals will have lower social interest and learned resourcefulness scores, higher scores on depressive symptoms, worthlessness, powerlessness, and hopelessness, and lower adaptive functioning scores than nondepressed adults.	MANOVA
4. Subjects with high scores on instruments measuring health-seeking resources in the presence of high scores on negative personal belief indices, will have higher scores in adaptive functioning than those with low scores on instruments measuring health-seeking resources.	Two-way ANOVA

Through simple correlations between variables addressed in the first research hypothesis, relationships between social interest (SIS score), learned resourcefulness (SCS score), depressive symptoms (selected BDI item score), negative personal beliefs (CTI subscale scores for view of self, world, and future), and adaptive functioning (CLSS score) were analyzed at an interval level. The strength of these relationships were expressed in terms of Pearson's correlation coefficients (Woods & Catanzaro, 1988).

Multiple regression analysis addressed the second research hypothesis. More specifically, standard multiple regression was used to determine a linear combination of independent variables (social interest, learned resourcefulness, and depressive symptoms)

to optimally predict the dependent variable (adaptive functioning). In addition, standard multiple regression was used to establish a linear combination of independent variables (worthlessness, powerlessness, and hopelessness) to optimally predict the dependent variable (depressive symptoms). Simultaneous entry of all independent variables in each of these regression analyses allowed for the assessment of relationships among the variables (Tabachnick & Fidell, 1989).

The third research hypothesis was addressed by MANOVA. This procedure accounted for variation in more than one independent variable and more than one dependent variable (Woods & Catanzaro, 1988). In addition, MANOVA considered intercorrelations of the dependent variables (social interest, learned resourcefulness, negative personal beliefs, depressive symptoms, and adaptive functioning) with the independent variable (group) at a nominal level. Differences between groups on specified variables were determined and a linear combination of dependent variables was created to maximize group differences (Tabachnick & Fidell, 1989).

The final research question was answered using a series of two-way ANOVAs to determine the interaction effects of each health-seeking resource with each negative personal belief in affecting adaptive functioning. The two groups were analyzed separately. In each analysis, there were two independent variables acting on a single dependent variable. Therefore, besides the proposed research question, other research hypotheses were also be tested through two-way ANOVAs (Polit & Hungler, 1987). First, differences in subjects due to social interest or learned resourcefulness were determined. Second, differences in subjects due to negative personal beliefs were determined. Third, examination of the differential effect of the two variables was performed. This final analysis represented the testing of the interaction hypothesis described by the fourth research question of this study.

CHAPTER FOUR

Introduction

This chapter provides a presentation of the study results and a discussion of those findings in relation to both theoretical and practical issues. Study results include the description of demographic characteristics of subjects in both the depressed and nondepressed groups. For each research question, the required statistical analysis, assumptions, pertinent findings and post hoc analysis, when indicated, will be reported. Results of the study are discussed in light of previously cited research, relationship to Schiotfeldt's (1975) health-seeking model and other related theories, and relevance for clinical nursing practice and education.

Results

Demographic Characteristics of Subjects. A total of 126 subjects were interviewed and completed all necessary study questionnaires. Of the total number of subjects, 63 were depressed and 63 were nondepressed adults. The depressed group included 29% from one psychiatric division (28-bed acute adult inpatient unit), 33% from another (18-bed acute adult inpatient unit), and 38% from the third unit (21-bed acute adult inpatient unit). Each of these units accepted adult patients (ages 18 and over) with a variety of psychiatric disorders. Each one was located within private general hospital settings. In the depressed group (N=63), 79.4% of the subjects were diagnosed with Major Depression while 9.5% had Bipolar Depression and 11.1% had Dysthymic Disorder.

The nondepressed group (N=63) included 27% college students, 24% businessmen or women, 33% hospital employees, and 16% church group members. All nondepressed subjects were recruited from the same community as the depressed group. Tables 6 and 7 reveal univariate statistics of the demographic variables for both depressed and nondepressed subjects.

Table 6. Comparison of depressed and nondepressed groups on demographic variables of sex and marital status.

Variable	Nondepressed (N = 63)	Depressed (N = 63)	Chi-Square	Sig.
Sex:				
Male	24	24	0.000	1.000
Female	39	39		
Marital Status:				
Single	18	17	5.224	0.265
Married	32	34		
Divorced	11	10		
Widowed	2	2		

Table 7. Comparison of depressed and nondepressed groups on demographic variables of age, education, and income.

Variable	Nondepressed		Depressed		T-value	Sig.
	Mean	St.Dev.	Mean	St.Dev.		
Age (years)	37.70	10.41	37.81	10.18	-0.06	.952
Education (yrs)	15.21	2.10	14.02	2.41	2.96	.004 *
Income(annual)	30,629	11348.49	23,751	12525.95	3.23	.002 *

Chi-square analysis indicated no significant difference in proportions of sex or marital status for the two groups (Table 6). T-tests for independent samples revealed no significant difference between means in the two groups in terms of age. However, t-tests for independent groups revealed the two groups differed significantly in terms of education, and income (Table 7). Because the two groups were found to be significantly different in years of education and annual income as indicated in Table 7, these variables were entered into a preliminary regression analysis to determine their significance in

predicting depressive symptoms and adaptive functioning. Tables 8 and 9 depict preliminary regression results for all demographic variables in predicting depressive symptoms and adaptive functioning.

Table 8. Preliminary regression analysis for prediction of depressive symptoms in depressed and nondepressed groups.

Variable	Nondepressed			Depressed		
	B-value	F-value	Sig.	B-value	F-value	Sig.
Income	.180	1.792	.1862	.087	0.519	.4742
Education	.079	0.331	.5675	.143	1.666	.2023

Table 9. Preliminary regression analysis for prediction of adaptive functioning in depressed and nondepressed groups.

Variable	Nondepressed			Depressed		
	B-value	F-value	Sig.	B-value	F-value	Sig.
Income	.001	0.000	.9942	.004	0.001	.9744
Education	.192	2.150	.1484	.014	0.011	.9158

In separate regression analyses for depressed and nondepressed groups, both education and income were not found to be significant predictors for either depressive symptoms or adaptive functioning. Accordingly, these variables were not included in any further analysis. In addition, preliminary data analysis for this comparative study included the description of both groups on all study variables. Table 10 shows the means and standard deviations for all study variables for both groups of subjects. In addition, t-test statistics and significance levels are included. Examination of these results indicated the groups were significantly different in terms of all study variables except social interest.

Table 10. Comparison of depressed and nondepressed groups on study variables.

Variable	Nondepressed		Depressed		T-value	Sig.
	Mean	St.Dev.	Mean	St.Dev.		
Social Interest	8.08	3.59	7.49	3.27	0.96	.339
Resourcefulness	117.84	18.04	72.08	30.28	10.28	.000 **
Worthlessness	6.38	4.62	33.79	15.71	-13.29	.000 **
Powerlessness	13.44	7.55	33.56	12.64	-10.84	.000 **
Hopelessness	8.36	5.85	33.98	16.60	-11.56	.000 **
Depressive Sx	3.27	2.46	14.95	5.52	-15.33	.000 **
Adap. Function	100.64	13.24	63.06	20.56	12.19	.000 **

Significance: * = .01 ** = .001

Research Hypothesis 1. The first research hypothesis stated that in both depressed and nondepressed subjects, higher scores on instruments measuring health-seeking resources will be correlated with lower scores on instruments measuring negative personal beliefs and higher scores in adaptive functioning. More specifically, higher scores in social interest and learned resourcefulness were expected to correlate with lower scores in worthlessness, powerlessness, hopelessness, and depressive symptoms, and higher scores in adaptive functioning. Therefore, those individuals having high social interest or learned resourcefulness were expected to have a more positive view of self, world, and future and to function better in activities of daily life. This hypothesis was only partially supported by study results for the two groups. SPSSPC was used to perform the correlational analysis required to evaluate this first research hypothesis.

Results were obtained through correlational analysis following the evaluation of underlying assumptions. Screening for normality included examination of means, variances, skewness, and kurtosis of study variables. There was no evidence of kurtosis. One variable, depressive symptoms, was found to have a skewed distribution in the

nondepressed group. To correct for skewness in this group, a square root transformation of depressive symptoms was used for the nondepressed group. Bivariate scatterplots for combinations of variables predicted to be related revealed no problem with nonlinearity or heteroscedasticity. Accordingly, preliminary data analysis revealed no gross violation of the assumptions of bivariate normality, linearity, and homoscedasticity.

Though the predicted directions for correlations between social interest and the other study variables, including worthlessness, powerlessness, hopelessness, depressive symptoms, and adaptive functioning, were found within this data set, the relationships were not all found to be significant. Table 11 reveals correlation coefficients of social interest with other study variables for both depressed and nondepressed subjects.

Table 11. Correlations of social interest with other study variables in depressed and nondepressed groups.

Variables	Nondepressed	Depressed
	Social Interest	Social Interest
Worthlessness	-.171	-.338 *
Powerlessness	-.096	-.352 *
Hopelessness	-.077	-.276
Depressive Symptoms	-.094	-.188
Adaptive Functioning	.159	.286

Significance: * = .01 ** = .001

In addition, though the predicted directions for correlations between learned resourcefulness and the other study variables, including worthlessness, powerlessness, hopelessness, depressive symptoms, and adaptive functioning, were found within this data set, the relationships were not all found to be significant. Table 12 depicts correlation coefficients of learned resourcefulness with other study variables for both groups.

Table 12. Correlations of learned resourcefulness with other study variables in depressed and nondepressed groups.

Variables	Nondepressed	Depressed
	Resourcefulness	Resourcefulness
Worthlessness	-.214	-.713 **
Powerlessness	-.187	-.670 **
Hopelessness	-.317 *	-.753 **
Depressive Symptoms	-.280	-.361 *
Adaptive Functioning	.341 *	.704 **

Significance: * = .01 ** = .001

In comparing the two groups, Pearson correlation coefficients revealed social interest was significantly correlated with worthlessness, and powerlessness in the depressed group but not the nondepressed group (Table 11). In addition, Pearson correlation coefficients revealed learned resourcefulness was significantly correlated with worthlessness, powerlessness, hopelessness, adaptive functioning, and to a somewhat lesser degree, depressive symptoms, in the depressed group (Table 12). In comparison, learned resourcefulness was significantly correlated with hopelessness and adaptive functioning in the nondepressed group.

Research Hypothesis 2. The second research hypothesis, that in both depressed and nondepressed subjects, health-seeking resources (social interest and learned resourcefulness) will be more predictive of adaptive functioning than intervening factors (worthlessness, powerlessness, hopelessness, and depressive symptoms), was examined in two components. Each of these hypotheses were evaluated for the two groups. It was expected that scores on instruments measuring social interest and learned resourcefulness would be more predictive of adaptive functioning scores than the scores which reflected worthlessness, powerlessness, hopelessness, and depressive symptoms. Standard multiple

regression was performed using SPSSPC.

For both groups, the assumptions for regression analysis were evaluated and found to be satisfied. The ratio of subjects to number of independent variables in this study ($N = 63$ in each group and independent variables for each regression = 3) exceeded the recommended minimum ratio of 20:1 for cases-to-independent variable ratio (Tabachnick & Fidell, 1989). Following the calculation of Z scores for all study variables, no univariate outliers were detected. In addition, examination of residuals following regression using Mahalanobis distance revealed the presence of no multivariate outliers. Examination of bivariate correlations between pairs of variables and squared multiple correlations among study variables revealed no evidence of multicollinearity or singularity. Examination of residual scatterplots following regression revealed no violation of the assumptions of multivariate normality, linearity, homoscedasticity, and equality of variance. Examination of casewise plots of standardized residuals and Durbin-Watson statistics indicated that errors of prediction were independent of one another.

Hypothesis A stated that hopelessness would be more predictive of severity of depressive symptoms than worthlessness or powerlessness. This hypothesis was not supported for either of the depressed or nondepressed groups. Accordingly, hopelessness was not found to correlate more highly with depressive symptoms than worthlessness or powerlessness in either the depressed or nondepressed subjects. Table 13 summarizes the regression analysis for the three predictor variables (worthlessness, powerlessness, and hopelessness) for the dependent variable (depressive symptoms) in both the depressed and nondepressed groups of subjects.

Table 13. Regression analysis of worthlessness, powerlessness, and hopelessness as predictors of depressive symptoms.

Multiple Correlation Analysis:							
Parameter		Nondepressed		Depressed			
Multiple R		.48753		.57590			
R Square		.23769		.33166			
Adjusted R Square		.19893		.29768			
Standard Error		.53794		4.63054			
Analysis of Variance:		Nondepressed (N = 63)		Depressed (N = 63)			
Parameter	DF	Sum of Squares	Mean Square	Sum of Squares	Mean Square		
Regression	3	5.324	1.774	627.787	209.262		
Residual	59	17.074	.289	1265.070	21.442		
F-value		6.13205		9.75953			
Sig. of F		.000		.000			
Predictor Variables:		Nondepressed		Depressed			
Variable		B-value	F-value	Sig.	B-value	F-value	Sig.
Worthlessness		.056	8.24	.006 *	.210	6.04	.017 *
Powerlessness		.001	0.63	.432	.067	0.83	.365
Hopelessness		.023	3.04	.086	.031	0.12	.732
(Constant)		5.734	42.55	.000	19.464	196.23	.000

In the nondepressed group, the three independent variables, worthlessness, powerlessness, and hopelessness accounted for approximately 24% of the variance of depressive symptoms. In the depressed group, the same predictor variables accounted for 33% of the variance of depressive symptoms. Analysis of variance for the regression of the three predictor variables for depressive symptoms (Table 13) revealed that the

regression model fits the data for both groups as indicated by significant F values.

For the nondepressed group, the dependent variable depressive symptoms required square root transformation to correct for skewness. Only one independent variable, worthlessness (squared semipartial correlation = .11) contributed significantly to the prediction of depressive symptoms. The three independent variables in combination contributed another .09 in shared variability. Altogether, 24% (20% adjusted) of the variability in depressive symptoms was predicted by knowing scores on these three independent variables. Although correlation between powerlessness and depressive symptoms was .25, this variable did not contribute significantly to regression. Post hoc evaluation of the correlation between powerlessness and depressive symptoms revealed that it was not significantly different from zero, $F(3, 59) = 1.33$, $p < .05$. Thus, the relationship between powerlessness and depressive symptoms does not appear to result from the relationship between worthlessness and depressive symptoms or between hopelessness and depressive symptoms.

In addition, although the correlation between hopelessness and depressive symptoms was .34, this variable did not contribute significantly to regression. Post hoc evaluation of the correlation between hopelessness and depressive symptoms revealed that it was not significantly different from zero, $F(3, 59) = 2.60$, $p < .05$. Thus, the relationship between hopelessness and depressive symptoms does not appear to result from the relationship between worthlessness and depressive symptoms or between powerlessness and depressive symptoms.

For the depressed group, no study variables required transformation to correct for skewness. Only one independent variable, worthlessness (squared semipartial correlation = .07), contributed significantly to the prediction of depressive symptoms. The three independent variables in combination contributed another .26 in shared variability.

Altogether, 33% (30% adjusted) of the variability in depressive symptoms was predicted by knowing scores on these three independent variables. Although correlation between powerlessness and depressive symptoms was .35, this variable did not contribute significantly to regression.

Post hoc evaluation of the correlation between powerlessness and depressive symptoms revealed that it was not significantly different from zero, $F(3, 59) = 2.69$, $p < .05$. Therefore the relationship between powerlessness and depressive symptoms does not appear result from the relationship between worthlessness and depressive symptoms or between hopelessness and depressive symptoms. In addition, although correlation between hopelessness and depressive symptoms was .51, this variable did not contribute significantly to regression. Post hoc evaluation of the correlation between hopelessness and depressive symptoms revealed that it was significantly different from zero, $F(3, 59) = 6.84$, $p < .05$. Apparently, the relationship between hopelessness and depressive symptoms is an indirect result of the relationship between worthlessness and depressive symptoms or between powerlessness and depressive symptoms.

Regression coefficients (B values), F statistics, and significance of the three proposed predictor variables for depressive symptoms in both groups are also included in table 13. In summary, multiple regression analysis revealed that worthlessness was more significant than powerlessness and hopelessness in predicting depressive symptoms in both the depressed and nondepressed groups. In addition, in the nondepressed group, hopelessness approaches significance in predicting depressive symptoms.

Hypothesis B stated that both social interest and learned resourcefulness will be more predictive of adaptive functioning than depressive symptoms. This hypothesis was only partially supported by study results. Accordingly, both social interest and learned resourcefulness were not found to correlate more highly with adaptive functioning than

depressive symptoms. Table 14 summarizes the regression analysis for the three predictor variables (social interest, learned resourcefulness, and depressive symptoms) for the dependent variable (adaptive functioning) in both groups of subjects.

Table 14. Regression analysis of social interest, learned resourcefulness, and depressive symptoms as predictors of adaptive functioning.

Multiple Correlation Analysis:

Parameter	Nondepressed	Depressed
Multiple R	.57248	.71890
R Square	.32773	.51681
Adjusted R Square	.29355	.49224
Standard Error	11.12940	14.65421

Analysis of Variance:		Nondepressed (N = 63)		Depressed (N = 63)	
Parameter	DF	Sum of Squares	Mean Square	Sum of Squares	Mean Square
Regression	3	3562.649	1187.550	13551.736	4517.245
Residual	59	7307.954	123.864	12670.010	214.746
F-value		9.58756		21.03530	
Sig. of F		.000		.000	

Predictor Variables:	Nondepressed			Depressed		
Variable	B-value	F-value	Sig.	B-value	F-value	Sig.
Social Interest	.123	2.11	.152	.705	1.43	.237
Resourcefulness	.603	2.15	.148	.435	42.21	.000 *
Depressive Sx	-10.549	17.98	.001 *	-.351	0.93	.339
(Constant)	102.108	72.31	.000	31.679	11.12	.000

In the nondepressed group, the three independent variables, social interest, learned resourcefulness, and depressive symptoms accounted for approximately 33% of the variance of adaptive functioning. In the depressed group, the same predictor variables

accounted for 52% of the variance of adaptive functioning. Analysis of variance for the regression of the three predictor variables for adaptive functioning (Table 14) revealed that the regression model fits the data for both groups as indicated by significant F values.

For the nondepressed group, the dependent variable depressive symptoms required square root transformation to correct for skewness. Only one independent variable, depressive symptoms (squared semipartial correlation = .21), contributed significantly to the prediction of adaptive functioning. The three independent variables in combination contributed another .12 in shared variability. Altogether, 33% (29% adjusted) of the variability in adaptive functioning was predicted by knowing scores on these three independent variables. Although correlation between social interest and adaptive functioning was .16, this variable did not contribute significantly to regression. Post hoc evaluation of the correlation between social interest and adaptive functioning revealed that it was not significantly different from zero, $F(3, 59) = 0.51, p < .05$. Thus, the relationship between social interest and adaptive functioning does not appear to result from the relationship between depressive symptoms and adaptive functioning or between learned resourcefulness and adaptive functioning.

In addition, although correlation between learned resourcefulness and adaptive functioning was .34, this variable did not contribute significantly to regression. Post hoc evaluation of correlation between learned resourcefulness and adaptive functioning revealed that it was not significantly different from zero, $F(3, 59) = 2.59, p < .05$. Thus, the relationship between learned resourcefulness and adaptive functioning does not appear to result from the relationship between depressive symptoms and adaptive functioning or between social interest and adaptive functioning.

For the depressed group, none of the study variables required square root transformation to correct for skewness. Only one independent variable, learned

resourcefulness (squared semipartial correlation = .35), contributed significantly to the prediction of adaptive functioning. The three independent variables in combination contributed another .17 in shared variability. Altogether, 52% (49% adjusted) of the variability in adaptive functioning was predicted by knowing scores on these three independent variables. Although correlation between depressive symptoms and adaptive functioning was $-.35$, this variable did not contribute significantly to regression. Post hoc evaluation of the correlation between depressive symptoms and adaptive functioning revealed that it was not significantly different from zero, $F(3, 59) = 2.69, p < .05$. Therefore, the relationship between depressive symptoms and adaptive functioning does not appear to result from the relationship between social interest and adaptive functioning or between learned resourcefulness and adaptive functioning.

In addition, although correlation between social interest and adaptive functioning was $.29$, this variable did not contribute significantly to regression. Post hoc evaluation of correlation between learned resourcefulness and adaptive functioning revealed that it was not significantly different from zero, $F(3, 59) = 1.75, p < .05$. Thus, the relationship between learned resourcefulness and adaptive functioning does not appear to result from the relationship between depressive symptoms and adaptive functioning or between social interest and adaptive functioning. Regression coefficients (B values), F statistics, and significance of the three proposed predictor variables for adaptive functioning in both groups are also included in table 14. In summary, multiple regression analysis revealed that while learned resourcefulness was the most significant predictor for adaptive functioning in the depressed group, the absence of depressive symptoms best predicted adaptive functioning in the nondepressed group.

Research Hypothesis 3. The third research hypothesis stated that depressed individuals will have lower social interest and learned resourcefulness scores, higher scores

on depressive symptoms, worthlessness, powerlessness, and hopelessness, and lower adaptive functioning scores than nondepressed adults. This hypothesis was examined by the use of multivariate analysis of variance (MANOVA). SPSSPC was used to perform this analysis.

Assumptions underlying MANOVA were evaluated during data analysis. Sample sizes for the depressed and nondepressed groups were equal ($N = 63$ in each group). In addition, there were twelve times as many subjects as there were dependent variables, indicating no violation of the cases-to-dependent variable assumption (63:5 ratio). To achieve univariate normality, one variable within the nondepressed group, depressive symptoms, required square root transformation to correct for skewness. Other study variables were normally distributed. In addition, multivariate normality was determined through examination of residuals following regression. No multivariate outliers were detected by means of Mahalanobis distance. Normality was also determined through examination of normal probability plots of residuals following regression.

Univariate F tests revealed no gross violation of the equality of variance assumption. That is, none of the sample variances for dependent variables in the two groups differed more than three times the amount of the other variance (Ott, 1988). Performance of Box's M test as a measure of homogeneity of the variance-covariance matrix indicated the presence of heterogeneity. However, because sample sizes were equal, the robustness of the significance tests was expected and the outcome of Box's M was disregarded (Tabachnick & Fidell, 1989). Examination of bivariate scatterplots and residual analysis indicated no violation of the assumption of linearity. Examination of bivariate correlations between pairs of variables predicted to be related and squared multiple correlations among all study variables revealed no evidence of multicollinearity or singularity.

The third research hypothesis was supported for all variables except social interest. More specifically, omnibus MANOVA determined association of dependent variables with independent variable (group) and interactions. In addition, discriminant function analysis examined pattern and importance of dependent variables in relation to the group variable (depressed versus nondepressed group). MANOVA was performed on five dependent variables: social interest, learned resourcefulness, depressive symptoms, negative personal beliefs, and adaptive functioning.

Preliminary analysis of correlations among worthlessness, powerlessness, and hopelessness were high and almost indicative of multicollinearity. Accordingly, for this analysis, the composite index variable, negative personal beliefs, was used to replace worthlessness, powerlessness, and hopelessness. The independent variable was the group variable (depressed versus nondepressed). All dependent variables were entered into analysis simultaneously.

Omnibus MANOVA showed significant main effects for all dependent variables except social interest (Table 15). Pooled within-groups correlations revealed many correlations $> .30$ criteria. Therefore, univariate F-tests were inappropriate for determining relative importance of dependent variables. However, univariate statistics did provide information regarding between group differences on the variables of interest.

Table 15. Tests of significance for dependent variables in depressed and nondepressed groups.

Multivariate Tests of Significance:					
Test Name	Value	Approx. F	Hyp. DF	Error DF	Sig. of F
Pillais	.72674	63.82861	5.00	120.00	.000 **
Hotellings	2.65953	63.82861	5.00	120.00	.000 **
Wilks	.27326	63.82861	5.00	120.00	.000 **

Univariate F-tests with (1,124) D. F.:

Variable	Nondepressed		Depressed		F-value	Sig.
	Mean	St.Dev.	Mean	St.Dev.		
Social Interest	8.08	3.59	7.49	3.27	0.920	.339
Resourcefulness	117.84	18.04	72.08	30.28	105.680	.000 **
Negative Beliefs	28.19	14.69	101.33	41.98	187.772	.000 **
Depressive Sx	3.27	2.46	14.95	5.52	274.450	.000 **
Adap. Function	100.64	13.24	63.06	20.56	148.649	.000 **

Significance: * = .01 ** = .001

Post hoc discriminant function was performed to obtain structure coefficients for study variables. Discriminant function analysis defined one linear discriminant function. Structure coefficients indicated degree of similarity between each variable and discriminant function. Structure coefficients > 0.40 represented variables defining the linear discriminant function (McLaughlin & Marasculio, 1990). Results showed all variables except social interest defined the linear discriminant function. More specifically, relative importance of variables in predicting group membership was depressive symptoms (.91), negative personal beliefs (.75), adaptive functioning (.67), learned resourcefulness (.57), and social interest (.05). Classification results (table 16) revealed that group membership could be predicted from the selected study variables.

Table 16. Classification results for predicted group membership.

Actual Group	Cases	Predicted Grp 1	Predicted Grp 2
1 Depressed	63	58 or 92.1%	3 or 7.9%
2 Nondepressed	63	5 or 4.8%	60 or 95.2 %

Percent of "grouped" cases correctly classified: 93.65%

In summary, univariate descriptive statistics indicated that depressed subjects scored lower in social interest, learned resourcefulness, and adaptive functioning than nondepressed subjects. However, depressed subjects scored higher on the indices measuring depressive symptoms and negative personal beliefs. In addition, univariate F-tests showed significant between group differences on study variables selected for this analysis with the exception of social interest. Omnibus MANOVA demonstrated significant main effects for study variables when examined collectively. Post hoc discriminant function analysis revealed the relative importance of the selected study variables in predicting group membership. It was determined that the two groups were best differentiated by depressive symptoms, followed by negative personal beliefs, and adaptive functioning. Finally, classification results indicated that approximately 94% of the subjects in the study were correctly classified into depressed and nondepressed groups by means of their scores on instruments measuring social interest, learned resourcefulness, negative personal beliefs, depressive symptoms, and adaptive functioning.

Research Hypothesis 4. The fourth research hypothesis that subjects with high scores on instruments measuring health-seeking resources in the presence of high scores on negative personal belief indices, will have higher scores in adaptive functioning than those with low scores on instruments measuring health-seeking resources was subdivided into two hypothesis. Each of these hypotheses were examined within the depressed and

nondepressed groups using two-way analysis of variance. SPSSPC was used to perform the two-way analyses of variances needed to test this research hypothesis. The two groups were compared in terms of interaction effects between hypothesized variables. In addition, nested simple effects were examined for significant interactions.

Assumptions underlying analysis of variance were evaluated during data analysis. The study design, which used the median-split technique for this analysis, assured uncorrelated observations within samples and independent observations between samples. Examination of univariate distributions revealed no evidence of skewness or kurtosis of variables of interest within this analysis, indicating the presence of normality. In addition, preliminary analysis revealed that variances for variables of interest met the homogeneity of variance assumption despite the inequality of cell frequencies ($N = 15$ or 16) for the dichotomized subgroups within the depressed and nondepressed groups. Therefore, no gross violation of assumptions was evident for either of the two groups.

Hypothesis A, that subjects scoring high in social interest and worthlessness, powerlessness, or hopelessness, will have higher adaptive functioning scores than those with low social interest scores was not supported. In both groups, subjects with high scores on instruments measuring social interest and indices of worthlessness, powerlessness, or hopelessness, did not have significantly higher adaptive functioning scores than those subjects with low social interest scores. Table 17 depicts the two-way ANOVA results for the interaction between social interest and each negative personal beliefs affecting adaptive functioning for both depressed and nondepressed groups.

Table 17. Interaction between social interest and negative personal beliefs affecting adaptive functioning for depressed and nondepressed groups.

TWO-WAY ANOVA Results:		Nondepressed		Depressed	
Variable 1	Variable 2	F-value	Sig.	F-value	Sig.
Social Interest	Worthlessness	2.003	.162	.099	.754
	Powerlessness	.004	.951	.005	.942
	Hopelessness	.159	.691	.093	.762

In separate ANOVAs, there were no significant interaction effects between scores reflecting social interest and each negative personal belief in either the depressed or nondepressed groups (Table 17). Accordingly, those subjects in both groups who scored highly in social interest in the presence of a high score in one of the negative personal beliefs performed no better on the measure of adaptive functioning than those subjects with low social interest scores. Therefore, examination of nested simple effects was not necessary.

Hypothesis B, that subjects scoring high in learned resourcefulness and worthlessness, powerlessness, or hopelessness, will have higher adaptive functioning scores than their less resourceful counterparts was partially supported for both groups. In the nondepressed group, subjects with high scores in learned resourcefulness and high scores in worthlessness, powerlessness, or hopelessness were not significantly different from their less resourceful counterparts when adaptive functioning scores were compared. Table 18 depicts the two-way ANOVA results for the interaction between learned resourcefulness and each negative personal belief affecting adaptive functioning for both depressed and nondepressed groups.

Table 18. Interaction between learned resourcefulness and negative personal beliefs affecting adaptive functioning in depressed and nondepressed groups.

TWO-WAY ANOVA Results:		Nondepressed		Depressed	
Variable 1	Variable 2	F-value	Sig.	F-value	Sig.
Resourcefulness	Worthlessness	.074	.787	2.664	.108
	Powerlessness	.331	.567	10.356	.002 *
	Hopelessness	8.514	.005 *	5.279	.025 *

In separate ANOVAs, there were no significant interactions between learned resourcefulness and either worthlessness or powerlessness in the nondepressed group (Table 18). That is, nondepressed subjects who scored high in learned resourcefulness and either worthlessness or powerlessness did not rate more highly in adaptive functioning than those nondepressed subjects scoring low in learned resourcefulness. However, there was a significant interaction between learned resourcefulness and hopelessness in the nondepressed group which was confirmed by the examination of nested simple effects. Thus, subjects with high scores in both learned resourcefulness and hopelessness scores rated more highly on adaptive functioning than their less resourceful counterparts.

In the depressed group, subjects scoring high in learned resourcefulness in the presence of high worthlessness scores were not significantly different from their less resourceful counterparts in adaptive functioning. ANOVA revealed no significant interaction between worthlessness and learned resourcefulness in the depressed group. However, significant interactions were noted between learned resourcefulness and powerlessness and learned resourcefulness and hopelessness which were confirmed by examination of nested simple effects. Accordingly, subjects scoring highly on learned resourcefulness in the presence of high powerlessness or hopelessness scores rated more highly on adaptive functioning than their less resourceful counterparts.

Discussion

Research Hypothesis 1. It was expected that for both depressed and nondepressed adults, the two health-seeking resources of interest to this study, social interest and learned resourcefulness, would be negatively correlated with negative personal beliefs and severity of depressive symptoms and positively associated with adaptive functioning. That is, it was expected that high scores on instruments measuring social interest and learned resourcefulness would be associated with low scores on indices of worthlessness, powerlessness, hopelessness, and depressive symptoms, and high scores on adaptive functioning. Therefore, those individuals who exhibit high social interest or learned resourcefulness would be expected to have a more positive view of self, the world, and the future than those persons with low social interest or lacking in learned resourcefulness. In addition, those subjects with high social interest or learned resourcefulness would be expected to function more effectively in the performance of daily activities.

Study results indicated all correlations between pairs of study variables were in the expected direction, however, not all of them were significant. Comparatively speaking, correlations between social interest and other study variables were much lower than correlations between learned resourcefulness and the same variables for both the depressed and nondepressed groups. High social interest scores correlated significantly with low worthlessness and powerlessness scores in the depressed group. In addition, the correlation between high social interest scores and low hopelessness scores approached significance in the depressed group. High social interest scores were not found to correlate significantly with low worthlessness, powerlessness, or hopelessness scores in the nondepressed group.

However, psychometric testing revealed modest reliability for the Social Interest Scale (Crandall, 1975), the instrument used to measure social interest. Interpretation of

study results should necessarily consider that although the validity of the Social Interest Scale (Crandall, 1975) indicated the instrument was truly measuring the phenomena of interest, the Social Interest Scale (Crandall, 1975) may have been limited in its ability to measure the phenomena consistently or with great degree of dependability.

Results indicated between group differences in terms of the relationship between social interest and each negative personal belief. Accordingly, the presence of social interest in depressed adults appears to be related to more positive views of self, world, and future. This evidence supports Adler's theory of social interest which stipulates that social interest facilitates the tendency to view aspects of life in a realistic and positive manner (Adler, 1964). The relationship between high social interest and positive view of self may reflect the influence of interactions with others and the sociocultural milieu on the development of a positive self-concept (Fuller & Schaefer-Ayers, 1990). In addition, self-esteem derives in part from appraisal of others (Taylor, 1989). Finally, increased social interaction through involvement with others is believed to enable one to receive social stimulation which enhances self-esteem (Taft, 1985).

The relationship between social interest and positive view of the world may reflect a positive sense of control over one's environment in which other persons reside. Miller (1983) describes social networks as one source of power over one's environment. This sense of power or control over one's environment may elicit a positive view of one's world. The relationship between high social interest and a positive view of the future may be related to the importance one places on relationships with others and the significance of such relationships in one's future activities. Nowotny (1989) identified relating to others as one dimension of hope. In addition, Miller (1989) determined that sustaining relationships with others exist as a hope-inspiring strategy.

High social interest was found to be associated with low scores on negative

personal beliefs in the depressed but not the nondepressed group. Thus, high social interest is associated with more positive views of self, world, and future. This finding may be related to Beck's cognitive theory of depression (1967) which describes the negative "cognitive triad" consisting of negative views of self, world, and future as a direct antecedent of depressive illness (Beck, 1967). It appears there is little relationship between the negative cognitive triad (Beck, 1967) and social interest in nondepressed adults. One may speculate that lower social interest is associated with either the depressive illness itself or the fact that subjects in this group were diagnosed with some form of depression and hospitalized. Perhaps decreased social interest occurs as a dimension of depressive illness rather than a precursor to it. Further study of the relationship between social interest and specific personal beliefs is warranted in nondepressed subjects.

It was expected that social interest would be negatively related to depressive symptoms. That is, high social interest scores were postulated to be associated with low scores on the depressive symptoms scale, indicating the presence of few, if any, depressive symptoms. However, study results did not support this hypothesis for either the depressed or nondepressed group. Although previous research has supported the relationship between these variables (i.e. Crandall, 1984), the relationship between social interest and specific emotional, physical, and motivational symptoms reflective of depressive illness was not evident in this study. Thus, it appears that social interest is only related to the cognitive dimension of depression. Further research would clarify the relationship between social interest and the cognitive, emotional, physical, and motivational dimensions of depressive illness.

Finally, it was postulated that social interest would be positively related to adaptive functioning in both depressed and nondepressed adults. Therefore, it was

expected that high social interest scores would be associated with high adaptive functioning scores. Results indicated that for the depressed group, the correlation between these variables approached significance. This may reflect the association between an increased interest in others and the performance of one's social role in personal relations which is a part of adaptive functioning. According to Adler (1964), those with higher levels of social interest are better able to adapt in meeting the demands of life. One a life's major tasks is that of maintaining social relations (Adler, 1964). Managing the tasks of daily life, including personal care, social relationships, vocational skills, and leisure activities, exemplifies adaptive functioning.

Research hypothesis one also incorporated the analysis of the relationship of a second health-seeking resource, learned resourcefulness, with negative personal beliefs, depressive symptoms, and adaptive functioning. Again, it was expected that learned resourcefulness would be negatively related to each of the negative personal beliefs and depressive symptoms and positively related to adaptive functioning. Thus, it was hypothesized that high learned resourcefulness scores would be associated with low scores on indices measuring worthlessness, powerlessness, hopelessness, and depressive symptoms, and high scores on the scale reflecting adaptive functioning. Learned resourcefulness was found to correlate significantly in the hypothesized directions with all variables of interest in the depressed group. However, in the nondepressed group, learned resourcefulness was found to correlate significantly with hopelessness and adaptive functioning. In addition, high learned resourcefulness scores were found to approach significance ($R = -.28$) in correlating with low scores on the depressive symptoms scale, indicating the presence of few, if any, depressive symptoms.

Results indicated between group differences in terms of the relationship between learned resourcefulness and other hypothesized variables of interest. Thus, the presence

of learned resourcefulness in depressed adults appears to be related to a more positive view of self, world, and future. This evidence supports Rosenbaum's theory of learned resourcefulness (1983) which stipulates that learned resourcefulness enables an individual to control internal cognitive processes so that one can continue to function at an optimal level (Rosenbaum, 1983). One's personal belief system which comprises one's views of self, world, and future exemplify such internal cognitive processes (Beck, 1967).

The relationship between learned resourcefulness and positive view of self may reflect the idea that self-esteem derives from one's own perceptions of competency and efficacy (Taylor, 1989). Learned resourcefulness is believed to incorporate problem-solving and the belief in one's ability to cope effectively (Rosenbaum, 1983). The relationship between learned resourcefulness and positive view of the world may reflect the self-efficacy dimension of learned resourcefulness in relation to one's ability to exert control over the external environment (Simmons & West, 1985). In addition, the positive sense of control in one's world may be related to motivation and ability to problem solve, which are exemplary of learned resourcefulness (Rosenbaum, 1983).

The relationship between learned resourcefulness and positive view of the future may reflect the idea that hope allows one to act, achieve, and use crises as opportunities for growth. A positive view of the future may activate one's motivational system, sense of determination, and ability to problem solve (Korner, 1970). In addition, one with a positive view of the future may believe that behavioral change is possible and that one will be able to cope effectively when faced with adversity (Rosenbaum, 1983). Learned resourcefulness encompasses the ability to problem solve and the belief in one's ability to cope effectively (Rosenbaum, 1983).

High scores in learned resourcefulness were found to be associated with low scores on the indices measuring worthlessness, powerlessness, and hopelessness in the depressed

group. Therefore, it appears that depressed persons who are less resourceful have more negative views of self, world, and future. This finding may reflect Beck's cognitive theory of depression (1967) which describes the negative "cognitive triad" consisting of negative views of self, world, and future as a direct antecedent of depressive illness (Beck, 1967). It appears there is little relationship between the negative cognitive triad (Beck, 1967) and learned resourcefulness in nondepressed adults. Perhaps acutely depressed adult inpatients are less resourceful than their nondepressed counterparts as a result of their illness or hospitalization. Further study of the relationship between learned resourcefulness and specific personal beliefs may be warranted in nondepressed subjects.

It was expected that learned resourcefulness would be negatively associated with depressive symptoms. Therefore, it was postulated that high learned resourcefulness scores would be correlated with low scores on the depressive symptoms scale, indicating few, if any, depressive symptoms. Examination of bivariate correlations revealed significant relationships in the hypothesized directions between these variables for the depressed group and values which approached significance (.10) for the nondepressed group. Accordingly, for both groups, the relationship between learned resourcefulness and specific emotional, physical, and motivational symptoms reflective of depressive illness was evident in this study. Therefore, it appears that learned resourcefulness is not only related to cognitive aspects of depression.

Study results support Rosenbaum's theory of learned resourcefulness (1983) which specifies that learned resourcefulness constitutes a compendium of cognitive skills by which one controls the potentially disturbing effects that certain internal events (i.e. cognitions, emotions, sensations) may have on the performance of daily activities. The self-control of undesirable effects of internal processes is believed to include the minimization or elimination of disturbing thoughts, feelings, or impulses, so that the

individual may continue to function at an optimal level (Rosenbaum, 1983). Thus, it might be expected that the lack of learned resourcefulness may be associated not only the cognitive dimensions of depression, but also with the emotional, physical, and motivational symptoms which comprise depression. While this was evident for the depressed group, it was not so for the nondepressed subjects.

However, the bivariate correlation between high learned resourcefulness scores and low depressive symptom scores approached significance in this group. One interpretation of this finding may be that subjects in the nondepressed group may have reported symptoms which are usually associated with depressive illness, though not actually diagnosed with depression. It is noteworthy that the cognitive dimensions usually associated with depression (i.e. negative views of self and world) did not correlate significantly with learned resourcefulness in the nondepressed group. Further research in this area would clarify the relationship between learned resourcefulness and the emotional, physical, and motivational dimensions of depressive illness.

Finally, it was postulated that learned resourcefulness would be positively related to adaptive functioning in both depressed and nondepressed adults. Accordingly, it was expected that high learned resourcefulness scores would be associated with high adaptive functioning scores. Results indicated that for both groups, the correlation between these variables were significant. Study results support Rosenbaum's theory of learned resourcefulness (1983) which stipulates that resourceful individuals are able to perform daily activities despite the presence of potentially disturbing thoughts, feelings, or sensations. Highly resourceful persons, by definition, use positive self-statements and problem solving skills, are able to delay gratification of immediate needs, and believe in their own ability to cope effectively (Rosenbaum, 1983). The presence of these cognitive skills which comprise learned resourcefulness appears to be positively related to one's

ability to perform self-care activities, maintain social relationships, develop vocational skills, and productively use leisure time (Smith & Ford, 1990).

Study results indicated that although the association between learned resourcefulness and adaptive functioning was significant for both groups, the relationship was much stronger for the depressed group. Although this difference between groups was unexpected, it is perhaps indicative of the importance of learned resourcefulness to the optimal functioning in daily activities for depressed persons. Managing the tasks of daily life which comprise adaptive functioning, including personal care, social relationships, vocational skills, and leisure activities, are undoubtedly more difficult for depressed individuals. For these persons, the development of cognitive skills to minimize or eliminate potentially disturbing internal processes associated with depressive illness is essential. Development of the cognitive skills comprising learned resourcefulness would enhance the depressed individual's ability to function at an optimal level.

Research Hypothesis 2. According to Schlottfeldt's (1975) health-seeking model, it was expected that in both depressed and nondepressed adults, health-seeking resources would be more predictive of adaptive functioning than intervening factors. Therefore, it was believed that social interest and learned resourcefulness would better predict adaptive functioning than depressive symptoms. In addition, it was anticipated that of the cognitive factors associated with depressive illness, hopelessness would be most predictive of depressive symptoms when compared to worthlessness and powerlessness. Study results revealed this hypothesis was partially supported.

To investigate research hypothesis two, worthlessness, powerlessness, and hopelessness were first examined as predictors for depressive symptoms for both depressed and nondepressed adults. Study results indicated that worthlessness was most predictive of depressive symptoms for both groups. Though this finding contradicts previous

research which supports hopelessness as most predictive of depressive symptoms (Layne, et al, 1983), depressive illness (Lewisohn, et al, 1982), and suicide (Beck, et al, 1975), the strong relationship between worthlessness and the presence of emotional, physical, and motivational symptoms associated with depressive illness seems logical.

Clinicians have consistently described impoverished self-esteem as a central feature of depression (Arieti & Bemporad, 1978). Difficulties associated with acquisition of a positive sense of self has been believed to create vulnerability for depressive illness (Weissman & Klerman, 1981). Taylor (1989) claims self-esteem derives from perceptions of competency and efficacy and appraisals by others. Generally, people hold positive self-enhancing beliefs about themselves, the world, and the future (Taylor, 1989). Therefore, a positive view of self may be a forerunner of positive views of the world and future, making it of paramount importance when considering the incidence of depressive symptoms. As self-esteem declines, so does one's belief that he can exert control over his environment (Taft, 1985). In addition, attribution of failure to one's lack of ability and low self-esteem leads to decreased expectations for the future and reduced sense of optimism (Antaki & Brewin, 1982).

When the two groups were compared, it appeared that worthlessness was a stronger predictor for depressive symptoms in the nondepressed group than in the depressed group as indicated by greater significance levels. In addition, hopelessness approached significance (.09) in predicting depressive symptoms in the nondepressed group. This was not expected. Perhaps emotional, physical, or motivational symptoms usually associated with depressive illness existed within the nondepressed group for some reason other than depression. Accordingly, these symptoms, and not depressive illness itself, were predicted by their negative views of self and future in the nondepressed group.

Nondepressed people may be showing a particular vulnerability for future

development of depressive symptoms and subsequent depression as evidenced by the unique contributions of cognitive factors, including worthlessness and hopelessness, to the prediction of depressive symptoms in this group. This supports Beck's cognitive theory of depression (1973) which proposes that depression is primarily a result of the tendency to view the self, world, and future in an unrealistically negative manner. However, for the depressed subjects, who consisted of acutely depressed inpatients who met diagnostic criteria for one of three known depressive syndrome, the emotional, physical, and motivational symptoms may have a distinct biochemical component, not addressed by this study. Further research to determine the significance of biochemical factors in predicting depressive symptoms is recommended.

To further investigate research hypothesis two, each health-seeking resource was considered as a predictor of adaptive functioning along with depressive symptoms. Consistent with Schlotfeldt's (1975) health-seeking model, it was expected that both social interest and learned resourcefulness would be more predictive of adaptive functioning than depressive symptoms. This hypothesis was partially supported by results in the depressed group. Whereas learned resourcefulness was a significant predictor of adaptive functioning in this group, social interest only approached significance. Again, one should consider the modest reliability of the instrument measuring social interest in this study which may be a factor in the interpretation of the results.

Study results indicating learned resourcefulness as the best predictor of adaptive functioning in depressed subjects supports Rosenbaum's theory of learned resourcefulness (1983) which specifies that highly resourceful individuals utilize specific cognitive skills to overcome depressed feelings so that they are able to function independently in their activities of daily living. In addition, results support Schlotfeldt's (1975) health-seeking model which postulates that health-seeking behaviors are positively related to the health

goal. Accordingly, learned resourcefulness which exemplifies one health-seeking behavior was found to be the best predictor for adaptive functioning in depressed adults.

However, in the nondepressed group, the absence of depressive symptoms was found to be most predictive of adaptive functioning. As expected, subjects in the nondepressed group, who consisted of persons never diagnosed or treated for depressive illness, reported fewer physical, emotional, and motivational symptoms. Absence of depressive symptoms significantly predicted adaptive functioning for this group. Learned resourcefulness and social interest only approached significance in predicting adaptive functioning in this group. Although these results did not lend support Schlotfeldt's (1975) health-seeking model, they yielded important information regarding the significance of learned resourcefulness in depressed persons. Accordingly, it appears that one's ability to function at an optimal level is primarily dependent on his mental health, as indicated by the absence of specific depressive symptoms which may relate to depressive illness. However, in the presence of depressive illness, as in the acutely depressed inpatients, the significance of learned resourcefulness in promoting adaptive functioning is prominent.

Research Hypothesis 3. It was predicted that the two groups of subjects would be significantly different in terms of each of the variables of interest. More specifically, it was expected that depressed persons would be more deficient in social interest and learned resourcefulness, report more depressive symptoms, increased negative personal beliefs, and report lower levels of adaptive functioning than their nondepressed counterparts. Therefore, in comparison to nondepressed subjects, depressed subjects were expected to have lower scores on social interest, learned resourcefulness, and adaptive functioning and higher scores on indices measuring worthlessness, powerlessness, hopelessness, and depressive symptoms. With the exception of the unanticipated finding for social interest, study results revealed that these hypotheses were supported by significant between group

differences in the expected direction for all remaining study variables. Although depressed subjects reported less social interest than the nondepressed persons, the difference between groups on this variable was not significant.

Further investigation revealed the two groups could be differentiated by means of the study variables. In fact, the groups were best differentiated by the presence of depressive symptoms, which included emotional, physical, and motivational symptoms. This finding was expected since subjects in the depressed group were selected on the basis of a diagnosis which met the criteria for one of three depressive syndromes. Incorporated with the diagnostic criteria for depressive illness are certain emotional, physical, and motivational symptoms. Nondepressed subjects, consisting of those who denied past diagnosis and treatment for depression, were not expected to have symptoms related to depressive illness.

The next significant variable to differentiate the two groups was negative personal beliefs. Accordingly, depressed and nondepressed subjects could be secondarily differentiated on the basis of reported worthlessness, powerlessness, and hopelessness, which represent cognitive dimensions related to depressive illness. Again, it appears logical that cognitive factors associated with depression would be next in importance when describing the two groups. Nondepressed adults would be expected to report more positive views of self, world, and future than individuals diagnosed with depressive illness.

Next in importance in differentiating depressed from nondepressed persons was adaptive functioning. Again, this finding is not surprising since the two groups were expected to be very different in terms of ability to perform activities of daily living. Lower levels of adaptive functioning have been found to be related to the diagnosis of depression. Learned resourcefulness was found to be least significant in differentiating

depressed from nondepressed persons. This may reflect the idea that learned resourcefulness is less related to the diagnosis of a depressive syndrome than other study variables. Nonetheless, the two groups could still be significantly differentiated in terms of learned resourcefulness.

Research Hypothesis 4. It was expected that there would be significant interaction effects between health-seeking resources and personal beliefs in affecting adaptive functioning in both the depressed and nondepressed groups. Study results revealed that subjects with high social interest scores and high scores on indices reflecting worthlessness, powerlessness, or hopelessness did not have significantly higher adaptive functioning scores than those with low social interest scores. While interaction effects between social interest and powerlessness and between social interest and hopelessness were far from significant in both the depressed and nondepressed groups, the interaction effect of social interest and worthlessness approached significance in the nondepressed subjects.

Study results should be interpreted in light of the modest reliability of the instrument measuring social interest. Findings failed to support for Adler's theory of social interest (1964) which states that innate social responsiveness militates against feelings of powerlessness, hopelessness, and threats to self-esteem so that one can better manage the tasks of daily life. In addition, these findings do not support Schlotfeldt's (1975) health-seeking model which stipulates that health-seeking mechanisms are inherent personal characteristics which individuals employ in the quest for optimal health in the presence of such intervening factors as pathology and personal beliefs.

Social interest is defined as a sociological health-seeking mechanism which describes an individual's innate potentiality for showing concern for and valuing others (Adler, 1964). Though social interest appears to meet the Schlotfeldt's criteria for being

classified as a health-seeking mechanism, perhaps it does not fit within the health-seeking model (1975). Further research may clarify interaction effects between social interest and each of the personal beliefs as these variables affect adaptive functioning in both depressed and nondepressed persons.

To further explore the hypothesis that there are significant interaction effects between health-seeking resources and personal beliefs in affecting adaptive functioning in both the depressed and nondepressed groups, the relationship between learned resourcefulness and each negative personal belief was also examined. Accordingly, it was expected that subjects with high learned resourcefulness scores and high scores on indices measuring worthlessness, powerlessness, or hopelessness, would score higher in adaptive functioning than those with low learned resourcefulness scores. Study results demonstrated this hypothesis was partially supported. In the nondepressed group, significant interaction effects were noted between learned resourcefulness and hopelessness. Thus, those nondepressed but highly resourceful subjects who reported increased feelings of hopelessness rated higher in adaptive functioning than their less resourceful counterparts. However, interaction effects between learned resourcefulness and worthlessness and between learned resourcefulness and powerlessness were not significant in this group.

In the depressed group, while the interaction effects between learned resourcefulness and powerlessness and between learned resourcefulness and hopelessness were significant, the interaction effects between learned resourcefulness and worthlessness in affecting adaptive functioning approached significance. Therefore, those depressed but highly resourceful subjects who reported more negative views of self, world, or future, scored higher in adaptive functioning than their less resourceful counterparts.

Whereas study results for the nondepressed group offer only partial support for

Rosenbaum's theory of learned resourcefulness (1983), findings in the depressed group fully support that theory, which specifies that highly resourceful persons are better able to control the potentially disturbing effects that certain internal processes (i.e. depressive cognitions) have on the performance of daily activities. It appears that the interaction between learned resourcefulness and personal beliefs is significant in the presence of depressive illness.

In addition, study results, especially for the depressed group, supported Schlotfeldt's (1975) health-seeking model which postulates that health-seeking behaviors represent a range of acquired assets (i.e. psychological activities) that are essential in achieving health despite the presence of such intervening factors as pathology or personal beliefs. Learned resourcefulness is defined as a psychological health-seeking behavior which consists of a compendium of acquired cognitive skills that minimize or eliminate the potentially disturbing effects of certain internal processes (i.e. depressive cognitions) may have on the performance of daily activities (Rosenbaum 1983). These findings also corroborate the results from regression analysis used to investigate hypothesis two in this study. It was determined that learned resourcefulness was most predictive of adaptive functioning in the depressed group while the absence of depressive symptoms were most predictive of adaptive functioning in the nondepressed group. It may be concluded that the importance of learned resourcefulness becomes more evident in persons afflicted with depressive illness.

CHAPTER FIVE

Introduction

This chapter provides a summary of the study of health-seeking resources and adaptive functioning in depressed and nondepressed adults. Pertinent findings related to the research questions addressed by the study are highlighted. Limitations of the study related to sampling and instrumentation issues are discussed. Implications for the study, including its relevance for nursing theory development, future nursing research, and clinical nursing practice are reviewed. Recommendations for future nursing research related to Schlotfeldt's (1975) health-seeking model conclude the chapter.

Summary

This study examined social interest and learned resourcefulness as health-seeking resources and their relationship to depressive symptoms, negative personal beliefs (worthlessness, powerlessness, hopelessness), and adaptive functioning in 63 depressed inpatients and 63 nondepressed individuals living in the community

Schlotfeldt's (1975) nursing conceptual model provided the guiding theoretical framework for examining relationships among health-seeking resources, intervening factors, and the health goal of adaptive functioning. Schlotfeldt (1975) stated the goal of nursing activity is to maximize health potential by focusing on health-seeking resources. Whereas social interest is an innate sociological health-seeking mechanism, learned resourcefulness is an acquired psychological health-seeking behavior. Intervening factors include negative personal beliefs and depressive symptoms, which may impede attainment of health goals, i.e. adaptive functioning, and mediate between health-seeking resources and performance of daily activities. Schlotfeldt's (1975) framework was used for testing direction and strength of relationships among health-seeking resources, intervening factors, and adaptive functioning in depressed and nondepressed adults.

A comparative survey design was used to contrast depressed and nondepressed adults on social interest, learned resourcefulness, negative personal beliefs, depressive symptoms, and adaptive functioning. A convenience sample of 126 adults allowed for adequate psychometric testing of instruments. This sample size exceeded the recommended sample size determined by power analysis for multiple regression / correlational analysis and MANOVA. The sample consisted of 63 acutely depressed inpatients and 63 subjects living in the community with no history of clinical depression. Subjects in both groups were both males and females, representing a variety of racial and ethnic backgrounds, between the ages of 21 and 65. Depressed subjects were recruited from three inpatient psychiatric units housed within two private general hospitals in the Cleveland area. Nondepressed subjects were volunteers living in the community with no previous history of treatment for depression. Nondepressed subjects responded to a posted advertisement in a local business, church, college, and hospital.

A structured interview format was used to collect the data. Five instruments were administered: Social Interest Scale, Self-Control Schedule, Beck Depression Inventory, Cognitive Triad Index, and Community Living Skills Scale. In addition, demographic data were collected to describe the depressed and nondepressed groups. Statistical analyses of study data included multiple regression, correlational analysis, and multivariate analysis of variance. Relationships among study variables were described for the two groups and analyzed as associations rather than causal relationships.

Four research questions were investigated in this study:

1. What is the relationship between selected health-seeking resources (social interest and learned resourcefulness), negative personal beliefs (worthlessness, powerlessness, hopelessness), depressive symptoms and adaptive functioning in depressed and nondepressed adults?
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2. Of the selected health-seeking resources (social interest and learned resourcefulness) and intervening factors (three negative personal beliefs and depressive symptoms), which is more predictive of adaptive functioning in depressed and nondepressed adults?
3. What are the differences in health-seeking resources (social interest and learned resourcefulness), negative personal beliefs (worthlessness, powerlessness, hopelessness), depressive symptoms, and adaptive functioning among depressed and nondepressed adults?
4. What are the interaction effects of each of the health-seeking resources (social interest and learned resourcefulness) and each of the negative personal beliefs (worthlessness, powerlessness, hopelessness) on adaptive functioning in persons experiencing various levels of severity of depression?

Pertinent Findings

Statistical analysis of demographic data revealed that depressed and nondepressed groups were not significantly different in age, sex, or marital status. The two groups were significantly different in terms of years of education and annual income. However, preliminary regression analyses revealed that neither of these variables were significant predictors of depressive symptoms or adaptive functioning. As a result, years of education and annual income were not included in further analysis.

For both groups, high scores on health-seeking resources were correlated with low scores on worthlessness, powerlessness, hopelessness, and depressive symptoms and high adaptive functioning scores. Correlations obtained were all in the predicted directions, however, not all were significant. Figure 2 summarizes the correlations between social interest and other study variables. Study results indicated that high social interest correlated significantly with low worthlessness and low powerlessness in the depressed

group. High social interest did not correlate significantly in the hypothesized directions with any of the study variables in the nondepressed group.

Figure 2. Hypothesized relationships and obtained correlations between social interest and other study variables in depressed and nondepressed groups.

Variables		Hypothesis	Depressed	Nondepressed
↑ Social Interest	Worthlessness	↓	*	
	Powerlessness	↓	*	
	Hopelessness	↓		
	Depressive Symptoms	↓		
	Adaptive Functioning	↑		
Significance: * = .01 ** = .001				

Figure 3 summarizes the correlations between learned resourcefulness and other study variables. Study results revealed that high learned resourcefulness correlated significantly with low hopelessness and high adaptive functioning in the nondepressed group. High learned resourcefulness correlated significantly in the hypothesized directions with all other study variables in the depressed group.

Figure 3. Hypothesized relationships and obtained correlations between learned resourcefulness and other study variables in depressed and nondepressed groups.

Variables		Hypothesis	Depressed	Nondepressed
↑ Learned Resourcefulness	Worthlessness	↓	**	
	Powerlessness	↓	**	
	Hopelessness	↓	**	*
	Depressive Symptoms	↓	*	
	Adaptive Functioning	↑	**	*
Significance: * = .01 ** = .001				

For both groups, worthlessness emerged as a significant predictor for depressive symptoms while powerlessness and hopelessness did not. However, adaptive functioning was best predicted by the absence of depressive symptoms in the nondepressed group and by learned resourcefulness in the depressed group. Figure 4 summarizes the results from multiple regression analysis for the prediction of depressive symptoms and adaptive functioning in both the depressed and nondepressed groups.

Figure 4. Hypothesized relationships and results from multiple regression for the prediction of depressive symptoms in depressed and nondepressed groups.

Findings indicated the two groups were clearly differentiated by the presence of depressive symptoms, negative personal beliefs, and adaptive functioning. Both groups were significantly different on all measures except social interest. Figure 5 summarizes hypothesized between group differences and t-test results showing the comparison of the two groups on all study variables.

Figure 5. Hypothesized between group differences and t-test results comparing depressed and nondepressed groups on study variables.

Variables	Hypothesized Differences		Mean Differences	
	Depressed	Nondepressed	Depressed	Nondepressed
Social Interest	L	H	L	H
Learned Resourcefulness	L	H	L **	H **
Worthlessness	H	L	H **	L **
Powerlessness	H	L	H **	L **
Hopelessness	H	L	H **	L **
Depressive Symptoms	H	L	H **	L **
Adaptive Functioning	L	H	L **	H **

L = lower score on variable

H = higher score on variable

Significance: * = .01 ** = .001

Finally, results revealed both depressed and nondepressed subjects with high social interest scores in the presence of high worthlessness, powerlessness, or hopelessness scores were not significantly different from those with low social interest scores in terms of adaptive functioning. However, both depressed and nondepressed subjects with high learned resourcefulness scores in the presence of high hopelessness scores were significantly different from their less resourceful counterparts in terms of adaptive functioning. In addition, depressed but highly resourceful subjects having high scores in worthlessness or powerlessness were significantly different in adaptive functioning when compared to those scoring low in learned resourcefulness. Figure 6 summarizes the interaction effects of each of the health-seeking resources with each of the negative personal beliefs in affecting adaptive functioning for both the depressed and nondepressed groups as determined through two-way ANOVA.

Figure 6. Hypothesized and computed interaction effects for health-seeking resources and negative personal beliefs affecting adaptive functioning in depressed and nondepressed groups.

Interacting Variables		Hypothesis	Depressed	Nondepressed
↑ Social Interest	↑ Worthlessness	+		
	↑ Powerlessness	+		
	↑ Hopelessness	+		

↑ Learned Resourcefulness	↑ Worthlessness	+	X	
	↑ Powerlessness	+	*	
	↑ Hopelessness	+	+	*

Significance: + = .05 * = .01 ** = .001

X = Approaching significance (.11)

Limitations

Two limitations existed for this study. The use of convenience sampling limited the generalizability of findings across populations. However, all acutely depressed persons hospitalized within the given time frame were considered as potential subjects until the desired sample size was reached. It was hoped that the admission of acutely depressed persons was random in terms of demographic characteristics and severity of depression. For nondepressed subjects, volunteers were recruited from a variety of sources, including the college campus, church groups, business organizations, and hospital employees. A second limitation may be related to the responses by subjects on questionnaire items, i.e. the possibility of responding in a socially desirable manner. Administration of a social desirability scale should be considered in future research to address this.

Implications

The significance of this study lies in its potential contribution to the advancement of the discipline of nursing, which encompasses theory, practice, and research. The interdependence among these dimensions provides the structure for the discipline of nursing (Conant, 1967; Dickoff, James, & Wiedenbach, 1968). In general, the significance of empirical nursing research lies in its potential for theory generation and development, validation of nursing interventions, and improvement in nursing practice (Schlotfeldt, 1971). This empirical study related Schlotfeldt's (1975) conceptual model of nursing to clinical nursing practice.

Nursing Theory Development. The usefulness and testability of Schlotfeldt's health-seeking model (1975) was evident from this research study. Derivation of specific hypotheses from Schlotfeldt's (1975) model contributes to further development and explication of that nursing model as well as the development of nursing knowledge. In this study of health-seeking resources and adaptive functioning, research questions are of particular concern to psychiatric nurses. Results from the study lend support to Schlotfeldt's (1975) conceptual nursing model by demonstrating the significance of one health-seeking behavior, learned resourcefulness, in predicting adaptive functioning in depressed adults.

In addition, this study showed that in the presence of high levels of powerlessness or hopelessness which were identified within the model as intervening factors, highly resourceful yet depressed adults evidenced higher levels of adaptive functioning than their less resourceful counterparts. This finding further contributes to explication of Schlotfeldt's model (1975) by indicating the importance of focusing on health-seeking behaviors rather than intervening factors to affect the health goal of adaptive functioning. Though Schlotfeldt (1975) does not identify health-seeking mechanisms as the primary

focus for nursing intervention, further study of this basic concept is needed since social interest as an inherent health-seeking mechanism was not supported by study results.

Future Nursing Research. Schlotfeldt's health-seeking model (1975) was developed to provide a basic theoretical model for structuring nursing science and for conceptualizing nursing research questions. Consistent with the health-promoting function of nursing practice, the focus of basic and clinical research is necessarily the advancement of knowledge concerning health. Research relating to health-seeking resources and adaptive functioning along with the prior discovery of effective nursing interventions for maintaining, supporting, compensating for, and augmenting health-seeking resources may be derived from Schlotfeldt's model (1975).

This study provides the impetus for future nursing research describing the effects of other health-seeking assets on the attainment of adaptive functioning in depressed adults and the empirical testing of the effectiveness of specific nursing interventions in achieving psychosocial adaptation in depressed clients. The results of this study may be applied to other nursing contexts where similar health-seeking assets or resources are identified in persons pursuing optimal psychosocial or physical health.

Clinical Nursing Practice. The usefulness of Schlotfeldt's (1975) model for nursing practice was demonstrated. The contribution of this study to nursing practice was twofold: It suggested the development of innovative nursing interventions directed toward enhancing health-seeking behaviors of individuals, and supported current psychiatric nursing interventions that focus on minimizing negative personal beliefs (i.e. worthlessness, powerlessness, and hopelessness). Although contemporary nursing education focuses on reducing hopelessness, study results indicated the need to emphasize the importance of building self-esteem in both depressed and nondepressed adults in order to prevent depressive symptom formation. In addition, psychiatric nursing interventions

relating to the development of social skills in depressed persons merit further examination. Study results indicated that specific nursing interventions to promote health-seeking behaviors, such as learned resourcefulness, would be useful in assisting depressed adults toward more productive and healthy lifestyles.

Recommendations

Recommendations for future nursing research include:

- 1) Examine the relationship between health-seeking resources and the health goal of adaptive functioning using larger samples of depressed persons;
 - 2) Investigate health-seeking resources and adaptive functioning in a sample of persons facing a major loss or physical illness;
 - 3) Examine learned resourcefulness over time to determine change as depressed patients recover from their illness;
 - 4) Study the usefulness of teaching cognitive skills associated with learned resourcefulness in affecting adaptive functioning in depressed persons using Schlotfeldt's (1975) nursing model;
 - 5) Examine other health-seeking behaviors, such as time management and organization, spirituality, and utilization of social support systems that may contribute to the development of Schlotfeldt's (1975) health-seeking model;
 - 6) Investigate other intervening factors (i.e. environmental and developmental) to further explicate Schlotfeldt's (1975) nursing model;
 - 7) Explore the decreased physical functioning, increased chronicity, and increased dependency needs which accompany depressive illness in elderly persons using Schlotfeldt's (1975) health-seeking model.
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REFERENCES

- Abramson, L., Seligman, M., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.
- Adler, A. (1964). Social interest: A challenge to mankind. New York: Capricorn Books.
- Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. Journal of Personality and Social Psychology, 5, 432-443.
- Altman, J. H., & Wittenborn, J. R. (1980). Depression-prone personality in women. Journal of Personality and Social Psychology, 41, 1129-1140.
- American Nurse's Association (1973). Standards of nursing practice. Kansas City, Mo.: Author.
- American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (Third edition - revised). Washington, D.C.: Author.
- Anastasi, A. (1982). Psychological Testing. New York: MacMillan.
- Antaki, C., & Brewin, C. (1982). Attributions and psychological change. London: Academic Press.
- Arieti, S., & Bemporad, J. (1978). Severe and mild depression: The psychoanalytic approach. New York: Basic Books.
- Bachman, J. G., & O'Malley, P. M. (1977). Self-esteem in young men: A longitudinal analysis of the impact of educational and occupational attainment. Journal of Personality and Social Psychology, 35(6), 365-380.
- Beck, A. T. (1967). Depression: Clinical, experimental, and theoretical aspects. New York: Harper & Row.
- Beck, A. T. (1973). The diagnosis and management of depression. Philadelphia: University of Pennsylvania Press.
- Beck, A. T. (1974). The development of depression: A cognitive model. In R. Friedman & M. Katz (Eds.), Psychology of depression: Contemporary theory and research (pp. 3-28). Washington, DC: Winston and Wiley.
- Beck, A. T. (1978). Cognitive therapy and emotional disorders. New York: International Universities Press.
- Beck, A. T., & Beamesderfer, A. (1974). Assessment of depression: The depression inventory. In P. Pichot (Ed.), Psychological measurement in psychopharmacology: Modern problems in pharmacopsychiatry, (Vol.7). Basel, Switz: Karger Publications.

- Beck, A. T., Kovacs, M., & Weissman, A. (1975). Hopelessness and suicidal behavior: An overview. Journal of the American Medical Association, 234, 1146-1149.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). Cognitive therapy of depression: A treatment manual. New York: Guilford Press.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.
- Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. Journal of Consulting and Clinical Psychology, 42, 861-865.
- Beckham, E.E., Leber, W. R., Watkins, J. T., Boyer, J. L., & Cook, J. B. (1986). Development of an instrument to measure Beck's cognitive triad: The cognitive triad inventory. Journal of Consulting and Clinical Psychology, 54(4), 566-567.
- Bell, H. (1963). Bell adjustment inventory manual. Palo Alto, CA: Consulting Psychologists Press.
- Billings, A. G., Cronkite, R. C., & Moos, R. H. (1985). Difficulty of follow-up and posttreatment functioning among depressed patients. Journal of Affective Disorders, 8(1), 9-16.
- Bisno, B., & Richardson, J. L. (1987). The relationship between depression and reinforcing events in cancer patients. Journal of Psychosocial Oncology, 5(2), 63-71.
- Blaney, P.H., Behar, V., & Head, R. (1980). Two measures of depressive cognitions: Their association with depression and with each other. Journal of Abnormal Psychology, 89, 678-682.
- Blatt, S. J., Wein, S. J., Chevron, E., & Quinlan, D. M. (1979). Parental representations and depression in normal young adults. Journal of Abnormal Psychology, 88, 388-397.
- Bloom, P. M., & Brady, J. P. (1968). An ipsative validation of the Multiple Affect Checklist. Journal of Clinical Psychology, 24, 45-46.
- Bloschl, L. (1984). Research on social contact and social support in depression. Psychological Studies, 26(4), 299-306.
- Bothwell, S., & Weissman, M. M. (1977). Social impairments four years after an acute depressive episode. American Journal of Orthopsychiatry, 47(2), 231-237.
- Braden, C. J. (1990). A test of the self-help model: Learned response to chronic illness experience. Nursing Research, 39(1), 42-47.

- Brink, P. J., & Wood, M. J. (1989). Advanced design in nursing research. Newbury, CA: Sage Publications.
- Bumberry, W., Oliver, J. M., & McClure, J. N. (1978). Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. Journal of Consulting and Clinical Psychology, 46, 150-155.
- Burkhart, B. R., Gynther, M. D., & Fromuth, M. E. (1980). The relative predictive validity of subtle versus obvious items on the MMPI depression scale. Journal of Clinical Psychology, 36, 748-751.
- Burns, N., & Grove, S. K. (1987). The practice of nursing research: Conduct, critique, and utilization. Philadelphia: W. B. Saunders.
- Carpenito, L. J. (1985). Handbook of nursing diagnosis. Philadelphia: J. B. Lippincott.
- Carpenito, L. J. (1992). Nursing diagnosis: Application to clinical practice. Philadelphia: J. B. Lippincott.
- Carver, C. S., & Ganellen, R. J. (1983). Depression and components of self-punitiveness: High standards, self-criticism, and overgeneralization. Journal of Consulting and Clinical Psychology, 92, 330-337.
- Cofer, D. H., & Wittenborn, J. R. (1980). Personality characteristics of formerly depressed women. Journal of Abnormal Psychology, 89, 309-314.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.
- Conant, L. H. (1967). Closing the practice-theory gap. Nursing Outlook, 15, 37-39.
- Conyne, R. K. (1983). Models for conducting student organization development. Personnel and Guidance Journal, 61(7), 394-397.
- Courey, L., Feurerstein, M., & Bush, C. (1982). Self-control and chronic headache. Journal of Psychosomatic Research, 26(5), 519-526.
- Coyne, J. C. (1985). Ambiguity and controversy: An introduction. In J. C. Coyne (Ed.), Essential papers on depression (pp. 1-22). New York: University Press.
- Crandall, J. E. (1975). A scale for social interest. Individual Psychology, 31, 187-195.
- Crandall, J. E. (1980). Adler's concept of social interest: Theory, measurement, and implications for adjustment. Journal of Personality and Social Psychology, 39(3), 481-495.
- Crandall, J. E. (1981). Theory and measurement of social interest: Empirical tests of Alfred Adler's concept. New York: Columbia University Press.

- Crandall, J. E. (1984). Social interest as a moderator of life stress. Journal of Personality and Social Psychology, 47(1), 164-174.
- Crandall, J. E., & Biaggio, M. K. (1984). Relations of two measures of social interest to ego defensiveness. Individual Psychology, 40, 83-91.
- Crandall, J. E., & Lehman, R. E. (1977). Relationships of stressful life events to social interest, locus of control, and psychological adjustment. Journal of Consulting and Clinical Psychology, 45, 1208.
- Crandall, J. E., & Putman, E. L. (1980). Relations between measures of social interest and psychological well-being. Individual Psychology, 36, 156-168.
- Crouch, M. A., & Stroub, V. (1983). Enhancement of self-esteem in adults. Family Community Health, 6(2), 76-78.
- Davis, H., & Unruh, W. R. (1981). The development of the self-schema in adult depression. Journal of Abnormal Psychology, 90, 125-133.
- DeMonbreun, B. G., & Craighead, W. E. (1977). Distortion of perception and recall of positive and neutral feedback in depression. Cognitive Therapy and Research, 1, 311-330.
- Derry, P. A., & Kuiper, N. A. (1981). Schematic processing and self-reference in clinical depression. Journal of Abnormal Psychology, 90, 286-297.
- Dickoff, J., James, P., & Wiedenbach, E. (1968). Theory in a practice discipline: Practice oriented research. Nursing Research, 17(6), 545-554.
- Dobson, K. S., & Breiter, H. T. (1983). Cognitive assessment of depression: Reliability and validity of three measures. Journal of Abnormal Psychology, 92, 107-109.
- Dobson, K. S., & Shaw, B. F. (1981). The effects of self-correction on cognitive distortions in depression. Cognitive Therapy and Research, 5, 391-404.
- Dow, M. G., & Craighead, W. E. (1987). Social inadequacy and depression: Overt behavior and self-evaluation processes. Journal of Social and Clinical Psychology, 5(1), 99-113.
- Drevdahl, D. (1989). Promoting power and control in the elderly client. Journal of Post Anesthesia Nursing, 4(1), 22-26.
- Elkins, P. H. (1985). Individual education: A critical review. Individual Psychology Journal of Adlerian Theory, Research, and Practice, 41(1), 30-38.
- Endicott, J., Spitzer, R. L., Fleiss, J. L., & Cohen, J. (1976). The global assessment scale. Archives of General Psychiatry, 33, 766-771.
- Feather, N. T., & Barber, J. G. (1983). Depressive reactions and unemployment. Journal of Abnormal Psychology, 92, 185-195.

- Fibel, B., & Hale, W. D. (1978). The generalized expectancy for success scale: A new measure. Journal of Consulting and Clinical Psychology, 46, 924-931.
- Forman, B. D., & Crandall, J. E. (1986). Social interest, irrational beliefs, and identity. Individual Psychology, 41, 26-34.
- Fox, L. L. (1987). Predicting outcome in cardiac rehabilitation: The role of learned resourcefulness (Doctoral dissertation, Virginia Consortium for Professional Psychology, 1986). Dissertation Abstracts International, 47(11), 4648B.
- Frost, R. O., Graff, M., & Becker, J. (1979). Self-evaluation and depressed moods. Journal of Consulting and Clinical Psychology, 47, 958-962.
- Fuller, J., & Schaefer-Ayers, J. (1990). Health assessment: A nursing approach. Philadelphia: J. B. Lippincott.
- Gallagher, D., Nies, G., & Thompson, L. W. (1982). Reliability of the Beck Depression Inventory with older adults. Journal of Consulting and Clinical Psychology, 50, 152-153.
- Gilbert, P. (1984). Controversies old and new. In P. Gilbert (Ed.), Depression: From psychology to brain state (pp. 1-19). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.
- Glazer, G. L., & Pressler, J. L. (1989). Schlotfeldt's health seeking nursing model. In J. J. Fitzpatrick & A. L. Whall (Eds.), Conceptual models of nursing: Analysis and application. Norwalk, CT: Appleton & Lange.
- Goldberg, C., & Stanitis, M. A. (1977). The enhancement of self-esteem through communication in group therapy. Journal of Psychiatric Nursing, 15(12), 5-7.
- Gordon, M. (1987). Manual of nursing diagnosis. New York: McGraw-Hill.
- Gordon, M. (1990). Toward theory-based diagnostic categories. Nursing Diagnosis, 1(1), 511.
- Gotlib, I. H. (1981). Self-reinforcement and recall: Differential deficits in depressed and non-depressed psychiatric inpatients. Journal of Abnormal Psychology, 90, 521-530.
- Greever, K. B., Tseng, M. S., & Friedland, B. U. (1973). Development of the social interest index. Journal of Consulting and Clinical Psychology, 41, 454-458.
- Gurtman, M. B. (1981). The relationship of expectancies for need attainment to depression and hopelessness in college students. Cognitive Therapy and Research, 5, 313-316.
- Haber, J., Hoskins, P. P., Leach, A. M., & Sideleau, B. F. (1987). Comprehensive psychiatric nursing. New York: McGraw Hill.

- Hamilton, E. W., & Abramson, L. Y. (1983). Cognitive patterns and major depressive disorders: A longitudinal study in a hospital setting. Journal of Abnormal Psychology, 92, 173-184.
- Hammen, C., & DeMayo, R. (1982). Cognitive correlates of teacher stress and depressive symptoms: Implications for attributional models of depression. Journal of Abnormal Psychology, 91, 96-101.
- Heitzman, G. N., & McColgin, C. C. (1989). Comprehensive nursing assessment of the depressed client. In L. Beeber (Ed.), Depression: Old problems, new perspectives in nursing care. Thorofare, NJ: Slack Incorporated.
- Hinds, C. (1990). Personal and contextual factors predicting patients' reported quality of life: Exploring congruency with Betty Neuman's assumptions. Journal of Advanced Nursing, 15, 456-462.
- Hjelle, L. A. (1975). Relationship of social interest to internal-external control and self-actualization in young women. Individual Psychology, 30, 171-174.
- Johnson, J. E., Petzel, T. P., Hartney, L. M., & Morgan, R. A. (1983). Recall of important ratings of completed and uncompleted tasks as a function of depression. Cognitive Therapy and Research, 7, 51-56.
- Jones, R. G. (1968). A factored measure of Ellis' irrational belief system. Wichita, KS: Test Systems.
- Kadner, K. D. (1989). Resilience: Responding to adversity. Journal of Psychosocial Nursing, 27(7), 20-25.
- Kane, C. F. (1988). Family social support: Toward a conceptual model. Advances in Nursing Science, 10(2), 18-25.
- Kanfer, R., & Zeiss, A. M. (1983). Depression, interpersonal standard setting, and judgments of self-efficacy. Journal of Abnormal Psychology, 92, 319-329.
- Karoly, P., & Ruehlman, L. (1983). Affective meaning and depression: A semantic differential analysis. Cognitive Therapy and Research, 7, 41-50.
- Kazdin, A. E., French, N. H., Unis, A. S., Esveltd-Dawson, K., & Sherick, R. B. (1983). Hopelessness, depression, and suicidal intent among psychiatrically disturbed inpatient children. Journal of Consulting and Clinical Psychology, 51, 504-510.
- Korner, I. N. (1970). Hope as a method of coping. Journal of Consultation and Clinical Psychology, 34(2), 134-139.
- Layne, C., Lefton, W., Walters, D., & Merry, J. (1983). Depression: Motivational deficits versus social manipulation. Cognitive Therapy and Research, 7, 125-132.

- Leak, G. K., & Williams, D. E. (1989). Relationship between social interest, alienation, and psychological hardiness. Individual Psychology, 45(3), 369-375.
- Lewisohn, P. M. (1974). A behavioral approach to depression. In R. J. Friedman & M. M. Katz (Eds.). The psychology of depression: Contemporary theory and research. New York: John Wiley & Sons.
- Lewisohn, P. M., Larson, D. W., & Munoz, R. F. (1982). The measurement of expectancies and other cognitions in depressed individuals. Cognitive Therapy and Research, 6, 437-446.
- Liberman, R. P., & Foy, D. W. (1983). Psychiatric rehabilitation for chronic mental patients. Psychiatric Annals, 13(7), 539-545.
- Limandri, B., & Boyle, D. (1978). Instilling hope. American Journal of Nursing, 78, 79-80.
- Lloyd, G. G., & Lishman, W. A. (1975). Effect of depression on speed of recall of pleasant and unpleasant experiences. Psychological Medicine, 5, 173-180.
- Lobitz, C., & Post, D. (1979). Parameters of self-reinforcement and depression. Journal of Abnormal Psychology, 88, 33-41.
- Lunghi, M. E. (1977). The stability of mood and social perception measures in a sample of depressive inpatients. British Journal of Psychiatry, 130(6), 598-604.
- MacLachlan, I. M. (1985). Learned resourcefulness, depression, and self-esteem. IRCS Medical Science, 13, 816-817.
- Martin, M., & Clark, D. M. (1985). Cognitive mediation of depressed mood and neuroticism. IRCS Medical Science, 13, 352-353.
- McLaughlin, F. E., & Marasculio, L. A. (1990). Advanced nursing and health care research: Quantification approaches. Philadelphia: W. B. Saunders.
- McRae, R. R., & Costa, P. T. (1988). Psychological resilience among widowed men and women: 10-year follow-up of a national sample. Journal of Social Issues, 44(3), 129-142.
- Metcalf, M., & Goldman, E. (1965). Validation of an inventory for measuring depression. British Journal of Psychiatry, 111, 240-242.
- Miller, J. (1983). Powerlessness: Coping with chronic illness. Philadelphia: F. A. Davis.
- Miller, J. F. (1985). Inspiring hope. American Journal of Nursing, 85, 22-25.
- Miller, J. F. (1989). Hope inspiring strategies for the critically ill. Applied Nursing Research, 2(1), 23-29.
-

- Missel, T., & Sommer, D. (1983). Depression and self-verbalization. Cognitive Therapy and Research, 7, 141-148.
- Nelson, R. E., & Craighead, W. E. (1977). Selective recall of positive and negative feedback, self-control behaviors, and depression. Journal of Abnormal Psychology, 86, 379-388.
- Neumen, B. (1982). The Betty Neumen health care systems model: A total person approach to patient problems. In J. P. Riehl, & S. C. Roy (Eds.), Conceptual models for nursing practice. New York: Appleton-Century-Crofts.
- Newman, M. (1979). Theory development in nursing. Philadelphia: F. A. Davis.
- Norman, W. H., Miller, I. W., & Klee, S. H. (1983). Assessment of cognitive distortion in a clinically depressed population. Cognitive Therapy and Research, 7, 133-140.
- Nowotny, M. L. (1989). Assessment of hope in patients with cancer: Development of an instrument. Oncology Nursing Forum, 16(1), 57-61.
- Nunnally, J. C. (1978). Psychometric Theory. New York: McGraw Hill Book Company.
- Nussbaum, K., Wittig, B. A., Hanlon, T. E., & Kurland, A. A. (1963). Intravenous nialamide in the treatment of depressed female patients. Comprehensive Psychiatry, 4, 105-116.
- O'Connell, W. E. (1965). Humanistic identification: A new translation for gemeinschaftsgefühl. Individual Psychology, 21, 44-47.
- Ott, L. (1988). An introduction to statistical methods and data analysis. Boston: PWS - Kent Publishing.
- Parks, A. (1979). The relationship between perceived adjustment and the self-esteem and social interest of adolescents following parental separation or divorce. Unpublished manuscript, Bowie State College Library, Bowie, MD.
- Pender, N. (1984). Health promotion and illness prevention. In H. H. Werley & J. J. Fitzpatrick (Eds), Annual review of nursing research (Chapter 4). New York: Springer Publishing.
- Peterson, C. (1979). Uncontrollability and self-blame in depression: Investigation of the paradox in a college population. Journal of Abnormal Psychology, 88, 620-624.
- Polit, D. F., & Hungler, B. P. (1987). Nursing research: Principles and methods. Philadelphia: J. B. Lippincott.
- Pratt, A. B. (1985). Summary of research on individual education to 1984. Individual Psychology Journal of Adlerian Theory, Research, and Practice, 41, 39-54.

- Redden, E. M., Tucker, R. K., & Young, L. (1983). Psychometric properties of the Rosenbaum schedule for assessing self-control. The Psychological Record, 33, 77-86.
- Regier, D. A., Hirschfield, R. M. A., Goodwin, F. K., Burke, J. D., Lazar, J. B., & Judd, L. L. (1988). The NIMH depression awareness, recognition, and treatment program: Structure, aims, and scientific basis. American Journal of Psychiatry, 145(11), 1351-1357.
- Rehm, L. P. (1977). A self-control model of depression. Behavior Therapy, 8, 787-804.
- Reynolds, W. M., & Gould, J. W. (1981). A psychometric investigation of the standard and short form Beck Depression Inventory. Journal of Consulting and Clinical Psychology, 49, 306-307.
- Richards, P. S. (1985). Construct validation of the Self-Control Schedule. Journal of Research in Personality, 19, 208-218.
- Robins, E., Munoz, R. A., Martin, S., & Gentry, K. A. (1972). Primary and secondary affective disorders. In J. Zubin & F. A. Freyhan (Eds.), Disorders of mood. Baltimore, MD: Johns Hopkins University Press.
- Rogers, T. R., & Forehand, R. (1983). The role of parent depression in interactions between mothers and their clinic referred children. Cognitive Therapy and Research, 7, 315-324.
- Rosenbaum, M. (1980a). A schedule for assessing self-controlling behaviors: Preliminary findings. Behavior Therapy, 11, 109-121.
- Rosenbaum, M. (1980b). Individual differences in self-control behaviors and tolerance of painful stimulation. Journal of Abnormal Psychology, 89(4), 581-590.
- Rosenbaum, M. (1983). Learned resourcefulness as a behavioral repertoire for the self-regulation of internal events: Issues and speculation. In M. Rosenbaum, C. M. Franks, & Y. Jaffee (Eds.), Perspectives on behavior therapy in the eighties (pp. 54-73). New York: Springer Publishing.
- Rosenbaum, M., & Ben-Ari, K. (1985). Learned helplessness and learned resourcefulness: Effects of noncontingent success and failure on individuals differing in self-control skills. Journal of Personality and Social Psychology, 48(1), 198-215.
- Rosenbaum, M., & Jaffee, Y. (1983). Learned helplessness: The role of individual differences in learned resourcefulness. British Journal of Social Psychology, 22, 215-225.
- Rosenbaum, M., & Palmon, N. (1984). Helplessness and resourcefulness in coping with epilepsy. Journal of Consulting and Clinical Psychology, 52(2), 244-253.

- Rosenbaum, M., & Rolnick, A. (1983). Self-control behaviors and coping with seasickness. Cognitive Therapy and Research, 7(1), 93-98.
- Rosenbaum, M., & Smira, K. B. (1986). Cognitive and personality factors in the delay of gratification of hemodialysis patients. Journal of Personality and Social Psychology, 51(2), 357-364.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
- Roth, D., & Rehm, L. P. (1980). Relationships among self-monitoring processes, memory, and depression. Cognitive Therapy and Research, 4, 149-158.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80, 1-10.
- Rozensky, R. H., Rehm, L. P., Pry, G., & Roth, D. (1977). Depression and self-depression and self-reinforcement behavior in hospitalized patients. Journal of Behavior Therapy and Experimental Psychiatry, 8, 31-34.
- Sacco, W. P. & Graves, D. J. (1984). Childhood depression, interpersonal problem solving, and self-ratings of performance. Journal of Clinical Child Psychology, 13, 10-15.
- Sacco, W. P., & Hokanson, J. E. (1978). Expectations of success and anagram performance of depressives in a public and private setting. Journal of Abnormal Psychology, 87, 122-130.
- Salkind, M. R. (1969). Beck Depression Inventory in general practice. Journal of the Royal College of General Practice, 18, 267-268.
- Schlotfeldt, R. M. (1971). The significance of empirical research for nursing. Nursing Research, 20(2), 140-142.
- Schlotfeldt, R. M. (1975). The need for a conceptual framework. In P. Verhonick (Ed.), Nursing research (pp. 3-23). Boston: Little Brown Publishing.
- Schwab, J., Bialow, M., & Holzer, C. (1967). A comparison of two rating scales for depression. Journal of Clinical Psychology, 23, 94-96.
- Shaw, J. B., & Weekley, J. A. (1985). The effect of objective work-load variations of psychological strain and post-work-load performance. Journal of Management, 11(1), 87-98.
- Shostrom, E. L. (1972). Manual for the personal orientation inventory. San Diego, CA: Educational and Industrial Testing Service.
- Simmons, R., & West, G. (1985). Life changes, coping resources, and health among the elderly. International Journal of Aging and Human Development, 20(3), 173-189.

- Simons, A.D., Lustman, P. J., Wetzel, R. D., & Murphy, G. E. (1985). Predicting response to cognitive therapy of depression: The role of learned resourcefulness. Cognitive Therapy and Research, 9(1), 79-89.
- Simpkins, A. (1985). Introduction: Individual education. Individual Education Journal of Adlerian Theory, Research, and Practice, 41(1), 3-7.
- Smith, M. K., & Ford, J. (1990). A client-developed functional level scale: The community living skills scale. Journal of Social Service Research, 13(3), 61-84.
- Stevick, R. A, Dixon, P. N., & Willingham, W. K. (1980). Locus of control and behavioral versus self-response measures of social interest. Individual Psychology, 36, 183-190.
- Strober, M., Green, J., & Carlson, G. (1981). Utility of the Beck Depression Inventory with psychiatrically hospitalized adolescents. Journal of Consulting and Clinical Psychology, 49, 482-483.
- Stuart, G. W., & Sundeen, S. J. (1987). Principles and practice of psychiatric nursing. St. Louis: C. V. Mosby.
- Summers, M. N. (1987). Individual differences in coping with osteoarthritis (Doctoral dissertation, University of Alabama, 1986). Dissertation Abstracts International, 47(10), 3860B.
- Tabachnick, B. G., & Fidell, L. S. (1989). Using multivariate statistics. New York: Harper Collins Publishers.
- Taft, L. B. (1985). Self esteem: A nursing perspective. Advances in Nursing Sciences, 8(1), 77-84.
- Taylor, J. A. (1953). A personality scale of manifest anxiety. The Journal of Abnormal and Social Psychology, 48, 285-290.
- Taylor, S. (1989). Positive illusions. New York: Basic Books.
- Umlauf, R. L., & Frank, R. G. (1987). Cluster analysis, depression, and ADL status. Rehabilitation Psychology, 32(1), 39-44.
- Warren, L. W., & McEachren, L. (1983). Psychosocial correlates of depressive symptomatology in adult women. Journal of Abnormal Psychology, 92, 151-160.
- Weissman, M. M. (1974). Treatment effects on the social adjustment of depressed patients. Archives of General Psychiatry, 30(6), 771-778.
- Weissman, M. M., & Klerman, G. (1981). Sex differences and the epidemiology of depression. In E. Howell & B. Bayes (Eds.), Women and mental health (pp.160-195). New York: Basic Books.

- Weissman, M. M., & Paykel, E. S. (1974). The depressed woman: A study of social relationships. Chicago: University of Chicago Press.
- Wener, A. E., & Rehm, L. P. (1975). Depressive affect: A test of behavioral hypotheses. Journal of Abnormal Psychology, 84, 221-227.
- Widner, R. B., & Cadoret, R. J. (1983). Depression: The great imitator of family practice. Journal of Family Practice, 17(3), 485-505.
- Williams, J., Barlow, D., & Agras, W. (1972). Behavioral assessment of severe depression. Archives of General Psychiatry, 72, 303-337.
- Wilson, A. R., & Krane, R. V. (1980). Change in self-esteem and its effects on symptoms of depression. Cognitive Therapy and Research, 4, 419-422.
- Woods, N. F., & Catanzaro, M. (1988). Nursing research: Theory and practice. St. Louis: C. V. Mosby.
- Zarski, J. J., West, J. D., & Bubenzer, D. L. (1982). Social interest, running, and life adjustment. Personnel and Guidance Journal, 61(3), 146-149.
- Zuckerman, M., & Lubin, B. (1965). Manual for the depression adjective checklist. San Diego: Educational and Industrial Testing Service.
- Zung, W. W. K. (1969). A cross-cultural survey of symptoms of depression. American Journal of Psychiatry, 124, 154-159.
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APPENDIX A: SUBJECT INFORMATION / INFORMED CONSENT

As a doctoral candidate at Francis Payne Bolton School of Nursing, Case Western Reserve University, I am doing a research study about the different approaches people take to managing their lives. Therefore, I am interested in your opinions, thoughts, and feelings about some specific issues, as well as, different ways you handle your daily activities and cope with stressful situations. I am asking you to participate in this study. Participation in the study will take about 45 minutes of your time. I will interview you and ask you your opinions on some items in a multiple choice format.

Your participation is entirely voluntary and you are free to withdraw at any time. Any questions you have will be answered at any time. There are no known physical or social risks to you. If you experience any psychological discomfort during the interview, I will end it. However, it has been my experience that people are usually pleased to share opinions and ideas regarding specific issues in life.

The information you provide is totally confidential. It will not be communicated openly. Your name will not be kept as part of the collected data. Instead, you will be assigned a code number and all the information you provide will be identified by that code number. The results of the study will be published and communicated to individuals who can use the results to better understand ways that people cope and get along in life. However, data from subjects will be analyzed as a group and you will not be individually identified. I, or my consultants, will be the only persons with access to the data. The results of the study could benefit others by assisting nurses to identify more effective ways of helping people cope with daily life stress.

Subject Signature _____

Witness Signature _____

Date _____

APPENDIX B: DEMOGRAPHIC QUESTIONNAIRE

ID # _____

Group _____

Directions: Please complete each of the following items.

- 1) Age in years: _____
 - 2) Sex: Male Female
 - 3) Education: (Indicate years completed)
Elementary _____ College _____
High School _____ Graduate School _____
 - 4) Race: Caucasian _____ Black _____
 Oriental _____ Hispanic _____
 Other _____
 - 5) Marital Status: Single _____ Married _____
 Divorced _____ Widowed _____
 Other _____
 - 6) Occupation (past or present): _____
 - 7) Employment Status: Full time _____ Retired _____
 Part time _____ Disabled _____
 Unemployed _____ Other _____
 - 8) Annual income: _____
 - 9) Religion: Roman Catholic _____ Jewish _____
 Baptist _____ Methodist _____
 Presbyterian _____ Protestant _____
 Jehovah Witness _____ Episcop. _____
 Lutheran _____ Christian _____
 Other _____ None _____
 - 10) Has any member of your family ever needed treatment or hospitalization for depression?

 Yes _____ No _____
- Relationship (i.e., parent, sibling, etc.) _____

APPENDIX C: SOCIAL INTEREST SCALE

Directions:

Below are a number of pairs of personal characteristics or traits. For each pair, choose the trait which you value more highly. In making each choice, ask yourself which of the traits in the pair you would rather possess as one of your own characteristics. For example, the first pair is "imaginative / rational." If you had to make a choice, which would you rather be? Check one trait from each pair to indicate your choice.

Some of the traits will appear twice, but always in combination with a different other trait. No pairs will be repeated.

Be sure to choose one trait in each pair (1 or 2).

I WOULD RATHER BE . . .

_____ 1. imaginative	_____ 1. helpful
_____ 2. rational	_____ 2. quick-witted
_____ 1. neat	_____ 1. level-headed
_____ 2. sympathetic	_____ 2. efficient
_____ 1. intelligent	_____ 1. self-reliant
_____ 2. considerate	_____ 2. ambitious
_____ 1. respectful	_____ 1. creative
_____ 2. original	_____ 2. sensible
_____ 1. generous	_____ 1. responsible
_____ 2. individualistic	_____ 2. likable
_____ 1. capable	_____ 1. trustworthy
_____ 2. tolerant	_____ 2. wise

I WOULD RATHER BE . . .

_____ 1. neat	_____ 1. forgiving
_____ 2. logical	_____ 2. gentle
_____ 1. efficient	_____ 1. practical
_____ 2. respectful	_____ 2. self-confident
_____ 1. alert	_____ 1. imaginative
_____ 2. cooperative	_____ 2. helpful
_____ 1. realistic	_____ 1. popular
_____ 2. moral	_____ 2. conscientious
_____ 1. considerate	_____ 1. reasonable
_____ 2. wise	_____ 2. quick-witted
_____ 1. sympathetic	_____ 1. ambitious
_____ 2. individualistic	_____ 2. patient

APPENDIX D: SELF-CONTROL SCHEDULE

Directions: Indicate how characteristic or descriptive each of the following statements is of you by using the code given below. Choose only one answer for each item.

VC = VERY CHARACTERISTIC OF ME

RC = RATHER CHARACTERISTIC OF ME

SC = SOMEWHAT CHARACTERISTIC OF ME

SU = SOMEWHAT UNCHARACTERISTIC OF ME

RU = RATHER UNCHARACTERISTIC OF ME

VU = VERY UNCHARACTERISTIC OF ME

-
1.	When I do a boring job, I think about the less boring parts of the job and the reward I will receive once I am finished.	VC	RC	SC	SU	RU	VU
-
2.	When I have something to do that is anxiety arousing for me, I try to visualize how I will overcome my anxiety while doing it.	VC	RC	SC	SU	RU	VU
-
3.	Often by changing my way of thinking I am able to change my feelings about almost everything.	VC	RC	SC	SU	RU	VU
-
4.	I often find it difficult to overcome my feelings of nervousness and tension without any outside help.	VC	RC	SC	SU	RU	VU
-
5.	When I am feeling depressed, I try to think about pleasant events.	VC	RC	SC	SU	RU	VU
-

6.	I cannot avoid thinking about mistakes I have made in the past.	VC	RC	SC	SU	RU	VU
7.	When faced with a difficult problem, I try to approach its solution in a systematic way.	VC	RC	SC	SU	RU	VU
8.	I usually do my duties quicker when somebody is pressuring me.	VC	RC	SC	SU	RU	VU
9.	When faced with a difficult decision, I prefer to postpone making it even if I have all the facts at my disposal.	VC	RC	SC	SU	RU	VU
10.	When I find that I have difficulty in concentration on my reading, I look for ways to increase my concentration.	VC	RC	SC	SU	RU	VU
11.	When I plan to work, I remove all things that are not relevant to my work.	VC	RC	SC	SU	RU	VU
12.	When I try to get rid of a bad habit, I first try to find out all the factors that maintain this habit.	VC	RC	SC	SU	RU	VU
13.	When an unpleasant thought is bothering me, I try to think about something pleasant.	VC	RC	SC	SU	RU	VU
14.	If I would smoke two packages of cigarettes a day, I probably would need outside help to stop smoking.	VC	RC	SC	SU	RU	VU

15.	When I am in a low mood, I try to act cheerful so that my mood will change.	VC	RC	SC	SU	RU	VU
16.	If I had pills with me, I would take a tranquillizer whenever I felt tense and nervous.	VC	RC	SC	SU	RU	VU
17.	When I am depressed, I keep myself busy with the things I like.	VC	RC	SC	SU	RU	VU
18.	I tend to postpone unpleasant duties even if I could perform them immediately.	VC	RC	SC	SU	RU	VU
19.	I need outside help to get rid of some of my bad habits.	VC	RC	SC	SU	RU	VU
20.	When I find it difficult to settle down and do a certain job, I look for ways to make me settle down.	VC	RC	SC	SU	RU	VU
21.	Although it makes me feel bad, I cannot avoid thinking about all kinds of possible catastrophes in the future.	VC	RC	SC	SU	RU	VU
22.	First of all, I prefer to finish a job that I have to do and then start doing the things I really like.	VC	RC	SC	SU	RU	VU
23.	When I feel pain in a certain part of my body, I try not to think about it.	VC	RC	SC	SU	RU	VU
24.	My self-esteem increases once I am able to overcome a bad habit.	VC	RC	SC	SU	RU	VU

25.	In order to overcome bad feelings that accompany failure, I often tell myself it is not so catastrophic and I can do something about it.	VC	RC	SC	SU	RU	VU
26.	When I feel that I am too impulsive, I tell myself "stop and think before you do anything."	VC	RC	SC	SU	RU	VU
27.	Even when I am terribly angry at somebody, I consider my actions very carefully.	VC	RC	SC	SU	RU	VU
28.	When I need to make a decision, I usually find out all possible alternatives instead of deciding quickly and spontaneously.	VC	RC	SC	SU	RU	VU
29.	Usually I do first the things I really like to do even if there are more urgent things to do.	VC	RC	SC	SU	RU	VU
30.	When I realize that I cannot help but be late for an important meeting, I tell myself to keep calm.	VC	RC	SC	SU	RU	VU
31.	When I feel pain, I try to divert my thoughts from it.	VC	RC	SC	SU	RU	VU
32.	I usually plan my work when I have a number of things to do.	VC	RC	SC	SU	RU	VU
33.	When I am short of money, I decide to record all my expenses in order to plan more carefully for the future.	VC	RC	SC	SU	RU	VU

34.	If I find it difficult to concentrate on a certain job, I divide it into smaller segments.	VC	RC	SC	SU	RU	VU
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35.	Quite often I cannot overcome unpleasant thoughts that bother me.	VC	RC	SC	SU	RU	VU
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36.	Once I am hungry and unable to eat, I try to divert my thoughts away from my stomach or try to imagine that I am satisfied.	VC	RC	SC	SU	RU	VU
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APPENDIX E: COGNITIVE TRIAD INDEX

Directions: Circle the answer which best describes your opinion. Choose only one answer for each idea. Use the code given below.

TA = TOTALLY AGREE SD = SLIGHTLY DISAGREE
 MA = MOSTLY AGREE MD = MOSTLY DISAGREE
 SA = SLIGHTLY AGREE TD = TOTALLY DISAGREE
 N = NEUTRAL

ANSWER THE ITEMS FOR WHAT YOU ARE THINKING RIGHT NOW.

1.	I have many talents and skills.	TA	MA	SA	N	SD	MD	TD
2.	My job (housework, schoolwork, daily duties) is unpleasant.	TA	MA	SA	N	SD	MD	TD
3.	Most people are friendly and helpful.	TA	MA	SA	N	SD	MD	TD
4.	Nothing is likely to work out for me.	TA	MA	SA	N	SD	MD	TD
5.	I am a failure	TA	MA	SA	N	SD	MD	TD
6.	I like to think about the good things that lie ahead for me.	TA	MA	SA	N	SD	MD	TD
7.	I do my work (job, schoolwork, housework) adequately.	TA	MA	SA	N	SD	MD	TD
8.	The people I know help me when I need it.	TA	MA	SA	N	SD	MD	TD

9.	I expect that things will be going very well for me a few years from now.	TA	MA	SA	N	SD	MD	TD
10.	I have messed up almost all important relationships I have ever had.	TA	MA	SA	N	SD	MD	TD
11.	The future holds a lot of excitement for me.	TA	MA	SA	N	SD	MD	TD
12.	My daily activities are fun and rewarding.	TA	MA	SA	N	SD	MD	TD
13.	I can't do anything right.	TA	MA	SA	N	SD	MD	TD
14.	People like me.	TA	MA	SA	N	SD	MD	TD
15.	There is nothing left in my life to look forward to.	TA	MA	SA	N	SD	MD	TD
16.	My current problems or concerns will always be there in one way or another.	TA	MA	SA	N	SD	MD	TD
17.	I am as adequate as other people I know.	TA	MA	SA	N	SD	MD	TD
18.	The world is a very hostile place.	TA	MA	SA	N	SD	MD	TD
19.	There is no reason for me to be hopeful about my future.	TA	MA	SA	N	SD	MD	TD

20.	The important people in my life are helpful and supportive.	TA	MA	SA	N	SD	MD	TD
21.	I hate myself.	TA	MA	SA	N	SD	MD	TD
22.	I will overcome my problems.	TA	MA	SA	N	SD	MD	TD
23.	Bad things happen to me a lot.	TA	MA	SA	N	SD	MD	TD
24.	I have a spouse / friend who is warm /supportive.	TA	MA	SA	N	SD	MD	TD
25.	I can do many things well.	TA	MA	SA	N	SD	MD	TD
26.	My future is simply too awful to think about.	TA	MA	SA	N	SD	MD	TD
27.	My family doesn't care what happens to me.	TA	MA	SA	N	SD	MD	TD
28.	Things will work out well for me in the future.	TA	MA	SA	N	SD	MD	TD
29.	I am guilty of a great many things.	TA	MA	SA	N	SD	MD	TD
30.	No matter what I do, others make things difficult for me.	TA	MA	SA	N	SD	MD	TD
31.	I am a worthwhile human being.	TA	MA	SA	N	SD	MD	TD

32.	There is nothing to look forward to in the years ahead.	TA	MA	SA	N	SD	MD	TD
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33.	I like myself.	TA	MA	SA	N	SD	MD	TD
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34.	I am faced with many difficulties.	TA	MA	SA	N	SD	MD	TD
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35.	I have serious flaws in my character.	TA	MA	SA	N	SD	MD	TD
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36.	I expect to be content and satisfied as the years go by.	TA	MA	SA	N	SD	MD	TD
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APPENDIX F: BECK DEPRESSION INVENTORY

Directions:

This questionnaire consists of 21 groups of statements. After reading each group of statements carefully, circle the number (0, 1, 2, or 3) next to the one statement in each group which best describes the way you have been feeling the past week, including today. If several statements within a group seem to apply equally well, circle each one. **Be sure to read all statements in each group before making your choice.**

i.	0	I do not feel sad.
	1	I feel sad.
	2	I am sad all the time and can't snap out of it.
	3	I am so sad or unhappy that I can't stand it.
-

2.	0	I am not particularly discouraged about the future.
	1	I feel discouraged about the future.
	2	I feel I have nothing to look forward to.
	3	I feel that the future is hopeless and that things cannot improve.
-

3.	0	I do not feel like a failure.
	1	I feel I have failed more than the average person.
	2	As I look back on my life, all I can see is a lot of failures.
	3	I feel I am a complete failure as a person.
-

4.	0	I get as much satisfaction out of things as I used to.
	1	I don't enjoy things the way I used to.
	2	I don't get real satisfaction out of anything anymore.
	3	I am dissatisfied or bored with everything.
-

5.	0	I don't feel particularly guilty.
	1	I feel guilty a good part of the time.
	2	I feel quite guilty most of the time.
	3	I feel guilty all of the time.
-

6.	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished.
	3	I feel I am being punished.
-

-
7.	0	I don't feel disappointed in myself.
	1	I am disappointed in myself.
	2	I am disgusted with myself.
	3	I hate myself.
-
8.	0	I don't feel I am any worse than anybody else.
	1	I am critical of myself for my weaknesses or mistakes.
	2	I blame myself all the time for my faults.
	3	I blame myself for everything bad that happens.
-
9.	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself, but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.
-
10.	0	I don't cry any more than usual.
	1	I cry more than I used to.
	2	I cry all the time now
	3	I used to be able to cry, but now I can't cry even though I want to.
-
11.	0	I am no more irritated now than I ever am.
	1	I get annoyed or irritated more easily than I used to.
	2	I feel irritated all the time now.
	3	I don't get irritated at all by the things that used to irritate me.
-
12.	0	I have not lost interest in other people.
	1	I am less interested in other people than I used to be.
	2	I've lost most of my interest in other people.
	3	I have lost all of my interest in other people.
-
13.	0	I make decisions about as well as I ever could.
	1	I put off making decisions more than I used to.
	2	I have greater difficulty in making decisions than before.
	3	I can't make decisions at all anymore.
-
14.	0	I don't feel I look any worse than I used to.
	1	I am worried that I am looking old or unattractive.
	2	I feel that permanent changes in my appearance make me unattractive.
	3	I believe that I look ugly.
-

-
15. 0 I can work about as well as before.
 1 It takes extra effort to get started at doing something.
 2 I have to push myself very hard to do anything.
 3 I can't do any work at all.
-

16. 0 I don't get more tired than usual.
 1 I get tired more easily than I used to.
 2 I get tired from doing almost anything.
 3 I am too tired to do anything.
-

17. 0 I can sleep as well as usual.
 1 I don't sleep as well as I used to.
 2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
 3 I wake up several hours earlier than I used to and cannot get back to sleep.
-

18. 0 My appetite is no worse than usual.
 1 My appetite is not as good as it used to be.
 2 My appetite is much worse now.
 3 I have no appetite at all anymore.
-

19. 0 I haven't lost much weight, if any, lately.
 1 I have lost more than 5 pounds.
 2 I have lost more than 10 pounds.
 3 I have lost more than 15 pounds.
-

I am purposely trying to lose weight by eating less Yes _____ No _____

20. 0 I am no more worried about my health than usual.
 1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
 2 I am very worried about physical problems and it's hard to think of much else.
 3 I am so worried about my physical problems that I cannot think about anything else.
-

21. 0 I have not noticed any recent change in my interest in sex.
 2 I am less interested in sex than I used to be.
 3 I am much less interested in sex now.
 3 I have lost interest in sex completely.
-

APPENDIX G: COMMUNITY LIVING SKILLS SCALE

Directions: Select the answer that is closest to how often you accomplish each act using the code given below. Choose only one answer for each item.

AA = ALMOST ALWAYS

U = USUALLY

S = SOMETIMES

HE = HARDLY EVER

1.	I do things that make me feel good about myself.	AA	U	S	HE
2.	I behave in an acceptable manner.	AA	U	S	HE
3.	My relationships with family members interfere with my life.	AA	U	S	HE
4.	I keep my hair neat.	AA	U	S	HE
5.	I have difficulty in concentrating on the task at hand.	AA	U	S	HE
6.	I have difficulty completing tasks as required.	AA	U	S	HE
7.	I walk or do some other exercise.	AA	U	S	HE
8.	I get along with people I live with.	AA	U	S	HE
9.	I can do my own laundry.	AA	U	S	HE
10.	I do things I enjoy.	AA	U	S	HE
11.	I go to bed at a reasonable hour.	AA	U	S	HE

12.	I find emotional support when needed.	AA	U	S	HE
13.	I have trusting relationships.	AA	U	S	HE
14.	I manage my time successfully.	AA	U	S	HE
15.	I control my anger.	AA	U	S	HE
16.	I get into trouble with people in authority.	AA	U	S	HE
17.	I have difficulty in listening to others.	AA	U	S	HE
18.	I am thorough when I work.	AA	U	S	HE
19.	I get to the doctor when I need to.	AA	U	S	HE
20.	I get to the dentist when I need to.	AA	U	S	HE
21.	I participate in activities with others.	AA	U	S	HE
22.	I get the amount of sleep I need.	AA	U	S	HE
23.	I show consideration for others.	AA	U	S	HE
24.	I fight depression when it comes.	AA	U	S	HE
25.	I can do (food) shopping.	AA	U	S	HE
26.	I am respectful of other person's rights.	AA	U	S	HE
27.	I avoid meeting new people.	AA	U	S	HE

28.	I eat balanced meals.	AA	U	S	HE
29.	I organize my tasks daily.	AA	U	S	HE
30.	I bathe enough to keep myself clean.	AA	U	S	HE
31.	I am capable of finding ways to solve my own problems.	AA	U	S	HE
32.	I keep my living quarters decent.	AA	U	S	HE
33.	I get dressed daily.	AA	U	S	HE
34.	I am afraid of being with others.	AA	U	S	HE
35.	I devote my time to my family.	AA	U	S	HE
36.	I learn skills required to do my work.	AA	U	S	HE
37.	I get along with my neighbors.	AA	U	S	HE
38.	I cope with my anxiety.	AA	U	S	HE
39.	I keep my appearance presentable.	AA	U	S	HE
40.	I have difficulty in getting up daily.	AA	U	S	HE
41.	I find transportation as needed.	AA	U	S	HE
42.	I manage my money.	AA	U	S	HE

APPENDIX G: PSYCHOMETRIC TESTING OF INSTRUMENTS

Data analysis included psychometric testing of all instruments used in the study. Accordingly, reliability and validity estimates were computed for all measures of the variables of interest. Reliability of a measuring instrument is a major criterion for assessing its quality and adequacy. Essentially, reliability is the degree of consistency with which it measures the attribute it is supposed to be measuring (Wood & Catanzaro, 1988). The most relevant estimate of reliability for this study was that of internal consistency. Accordingly, Cronbach's alpha which is based on the intercorrelation of all items examined simultaneously, was the method used to evaluate internal consistency of study instruments. In general, recommended alpha coefficients are .70 for an immature scale and .80 for mature instruments (Nunnally, 1978). Table 19 shows that for all measures of study variables, Cronbach's alpha coefficients are acceptable.

Table 19. Reliability estimates (Cronbach's alpha) for study instruments.

Variable	Instrument	Alpha
Social Interest	Social Interest Scale	.7467 *
Resourcefulness	Self-Control Schedule	.9457 **
Negative Beliefs	Cognitive Triad Inventory	.9706 **
Worthlessness	Cognitive Triad Inventory Subscale: View of Self	.9594 **
Powerlessness	Cognitive Triad Inventory Subscale: View of World	.9100 **
Hopelessness	Cognitive Triad Inventory Subscale: View of Future	.9643 **
Depressive Symptoms	Beck Depression Inventory Subscale: Symptoms	.9059 **
Adaptive Functioning	Community Living Skills Scale	.9682 **
Significance of Alpha:	* meets .70 criteria for immature scale (Nunnally, 1978). ** meets .80 criteria for mature scale (Nunnally, 1978).	

A second important criterion for evaluating the quality of an instrument is validity. Validity is the degree to which an instrument measures what it is supposed to be measuring (Woods & Catanzaro, 1988). Evaluation of validity is essential since high reliability of an instrument provides no evidence for its validity (Polit & Hungler, 1987). Three types of validity exist and all were applicable for the study instruments. First, content validity was determined for all instruments primarily through face validity. On inspection, each instrument appeared to measure the content area of interest to determine a score on a particular variable. In addition, a measure of construct validity was used to determine validity of each instrument. Construct validity was established by several methods, including confirmatory factor analysis, subscale-total scale correlations, and validation of proposed theoretical relationships with other measures. Table 20 depicts methods of construct validation used for each study instrument.

Table 20. Construct validation of study instruments.

Variable	Instrument	Construct Validation
Social Interest	Social Interest Scale	93% factor loadings > .30
Resourcefulness	Self-Control Schedule	Correlation with adaptive functioning = .7997
Negative Beliefs	Cognitive Triad Inventory	All subscale-total scale correlations > .65
Depressive Sx	Beck Depression Inventory	100% factor loadings > .30 Subscale-total scale correlation > .65
Adaptive Function	Community Living Skills Scale	Correlation with depression = -.7505

Confirmatory factor analysis for one factor was used for the Social Interest Scale (Crandall, 1981) and Depressive Symptom subscale of the Beck Depression Inventory

(Beck, et al, 1961). In both cases, over 90% of factor loadings exceeded the recommended .30 criteria (Nunnally, 1978). Construct validation by proposed theoretical relationships with other measures was used for the Self-Control Schedule (Rosenbaum, 1980) and Community Living Skills Scale (Smith & Ford, 1990). In both cases, correlations with instruments reflecting proposed theoretical relationships exceeded the recommended criteria of .30 (Nunnally, 1978). Subscale-total scale correlations were used to determine construct validity for the Cognitive Triad Inventory (Beckham, et al, 1986) and the Depressive Symptom subscale of the Beck Depression Inventory (Beck, et al, 1961). To establish construct validity, subscale-total correlations should exceed .65 (Anastasi, 1982). Subscale-total correlations supported construct validity for these two instruments.

Finally, criterion-related validity was assessed for each Cognitive Triad Inventory subscale (Beckham, et al, 1986). To determine criterion-related validity, each subscale was correlated with items of the Beck Depression Inventory (Beck, et al, 1961) which measure the same cognitive dimensions of depression. Table 21 consists of the criterion-related validity estimates for the three subscales of the Cognitive Triad Inventory (Beckham, et al, 1961).

Table 21. Criterion-related validity estimates for subscales of Cognitive Triad Inventory.

Variable	Instrument	Criterion Validity
Worthlessness	Cognitive Triad Inventory Subscale: View of Self	Correlation of .8263 with BDI-Worthlessness items
Powerlessness	Cognitive Triad Inventory Subscale: View of World	Correlation of .7068 with BDI-Powerlessness items
Hopelessness	Cognitive Triad Inventory Subscale: View of Future	Correlation of .7097 with BDI-Hopelessness item

Accordingly, the View of Self subscale of the Cognitive Triad Inventory was correlated with items of the Beck Depression Inventory which reflected worthlessness. Similarly, the View of World subscale of the Cognitive Triad Inventory (Beckham, et al, 1986) was correlated with items of the Beck Depression Inventory (Beck, et al, 1961) which measure powerlessness. Lastly, the View of Future subscale of the Cognitive Triad Inventory (Beckham, et al, 1986) was correlated with the item of the Beck Depression Inventory (Beck, et al, 1961) which reflects hopelessness. For each Cognitive Triad Inventory subscale (Beckham, et al, 1986), correlations exceeded the .70 criteria to support criterion validity recommended by Nunnally (1978).