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DIFFERENCES BETWEEN UNDERGRADUATE AND GRADUATE STUDENTS IN SELF-CONCEPT AND DEPRESSION

A Dissertation
Presented in Partial Fulfillment of the Requirements for the Degree
Doctor of Philosophy

by
Ann L. Woolley

June 2002
DIFFERENCES BETWEEN UNDERGRADUATE AND GRADUATE
STUDENTS IN SELF-CONCEPT AND DEPRESSION

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ABSTRACT

DIFFERENCES BETWEEN UNDERGRADUATE AND GRADUATE STUDENTS IN SELF-CONCEPT AND DEPRESSION

by

Ann L. Woolley

Chair: Nancy J. Carbonell
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

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Name of researcher: Ann L. Woolley

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Problem

Students have an opportunity for personal growth as they learn about themselves and the world around them. However, their levels of self-concept and depression can influence how they view themselves, their relationships, and their world. This research compared undergraduate and graduate students with respect to their levels of self-concept and depression.

Method

A quantitative research design was used for an ex post facto study of 239 students from Andrews University and Western Michigan University. They completed the Demographic Questionnaire, the Tennessee Self-Concept Scale: Second Edition (TSCS:2),
and the Beck Depression Inventory-II (BDI-II).

Results

Using 13 as the BDI-II cut score, the prevalence of depression found for undergraduate and graduate students combined was as follows: a total of 197 (82.4%) were nondepressed, a total of 21 (8.8%) demonstrated mild depressive symptoms, a total of 13 (5.4%) demonstrated moderate depressive symptoms, and a total of 8 (3.3%) demonstrated severe depressive symptoms.

The results indicated that undergraduate students demonstrated higher mean depression scores than the graduate students. However, there were no significant differences found between the proportion of undergraduate and graduate students in each BDI-II group.

There were no significant differences found in the level of self-concept between undergraduate and graduate students. There were significant differences found between the self-concept of students at different depression groups. For Identity Self-Concept only, the relationship between self-concept and depression was different for undergraduate and graduate students.

Conclusions

Although the majority of the participants were nondepressed, undergraduate students demonstrated higher mean depression scores than graduate students. Undergraduate and graduate students did not differ in their level of self-concept. There were significant differences found between the self-concept of students at different depression groups. In general, when undergraduate and graduate students were
nondepressed or the less depressed they were, then the better they felt about themselves. Conversely, the more depressed they were, then the worse they felt about themselves. The relationship between self-concept and depression was different for undergraduate and graduate students for Identity Self-Concept only. The results of this study suggested that therapeutic goals for students with symptoms of depression, undergraduate or graduate, would be similar.
In loving memory of Dr. Andrew P. Woolley, Jr.,
Helen Machlan, and Abbey Woolley
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CHAPTER I

INTRODUCTION

Background

Much has been written about the individual topics of self-concept and depression in the literature. Self-concept is considered a basic component of human existence. The idea of self-concept plays a main role in theory and research in psychology and is of interest to philosophers, educators, and scholars (Anderson, Reznik, & Chen, 1997; Branden, 1994; Gray-Little & Williams, 1997; Snodgrass & Thompson, 1997). Human beings long to determine a purposeful identity, have a better understanding of themselves and others, and to answer the questions “Who am I?” and “How can I relate to others?” (Branden, 1993; Crider, Goethals, Kavanaugh, & Solomon, 1989; Rachlin, 1997).

The term self-concept has been cited in the literature under a variety of names such as self-worth, self-respect, self-confidence, self-love, self-acceptance, and/or self-esteem (Bracken & Mills, 1994; Frey & Carlock, 1989; Wells & Marwell, 1976). For this research, I am not using the terms self-concept and self-esteem interchangeably. The self-concept is all-encompassing but includes the self-esteem. Self-concept consists of those roles, characteristics, or abilities that one considers to be basically representative of oneself. It contains the beliefs about one’s personal worth and is an overall summary of one’s
strengths, accomplishments, competencies, and deficiencies. Self-concept is basically what one thinks about oneself. Self-esteem is the evaluative component of the self-concept. Often, individuals use their self-esteem to evaluate the behavioral, psychological, and cognitive components of their self-concept. Self-esteem is basically what one feels about oneself (Bednar, Wells, & Peterson, 1989; Harwood, 1998; Rosenberg, 1985).

Individuals examine the question “Who am I?” at different stages throughout their lives. Changes in their lives, such as the birth of a sibling, moving away from home, starting college, getting married or divorced, starting a career, the birth of a child, and/or losing a loved one can trigger further exploration of the self (Grayson & Meilman, 1999; Hormuth, 1990). It is vital in today’s fast-paced society for persons to have a strong sense of self, to feel deserving and competent. Self-concept is related to issues in life such as contentment with self, achievement in school, relationships with others, choosing a career and/or mate, and general success in life (Bracken & Mills, 1994; Hattie, 1992).

Depression is another widely discussed topic in the literature. Depression touches every ethnic and cultural group, age group, income status, social class, and educational level. It has been called “the common cold of mental health” with approximately 100 million people worldwide and 23 million adults in the United States diagnosed with depression each year. In the United States alone, approximately $43-44 billion is lost each year in social, economic, and personal areas from the effects of depression (Gotlib, Wallace, & Colby, 1990; Karp, 1996; Lisser, 2002; Meyer & Deitsch, 1996; National Institute of Mental Health [NIMH], 1995, 1997, 1999).

Depression takes a toll on individuals and society with widespread effects in
areas such as relationships with others, physical health, academic performance, work performance, feelings of self-worth, and the ability to handle stress. Even if individuals are experiencing a mild form of depression which does not meet specific diagnostic criteria, according to the American Psychiatric Association's (2000) *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (*DSM-IV-TR*), their ability to function in the above-mentioned areas may certainly be affected (Dunner, 1997; Flynn & Cappeliez, 1993; Swallow & Segal, 1995).

Adults are not the only group where depressive disorders are found. In fact, depressive disorders among young adults are rising with 20% of major depression cases being diagnosed before the age of 25 years. The peak for major depression ranges from 15 to 19 years of age in females and 21 to 25 years of age in males (Feaster, 1996; National Depressive and Manic-Depressive Association [National DMDA], 1999, 2000).

The widespread effects of depression are important reasons to examine the prevention, occurrence, and treatment of depression. In fact, one area that is vital to explore in depression is suicidal ideation. Suicidal ideation has to be taken very seriously due to its potential lethality. Any type of psychiatric illness increases the risk of suicide with 90% of individuals who commit suicide also having a psychiatric illness. Of this 90%, 80% of individuals who commit suicide have a depressive disorder (Clark & Beck, 1999; Munoz & Ying, 1993; Robbins, 1993; Williams, 1995). Again, adults are not the only group at risk for suicidal ideation. Depression in children and adolescents also increases the risk of suicide. In 1996, in the age range of 15-24, suicide was the third leading cause of death (NIMH, 1999).
As one can see, much has indeed been written about the individual topics of self-concept and depression in the literature. The main characteristics of depression which have been universally accepted are low mood, pessimism, and self-criticism. Self-criticism is connected to feelings of low self-concept. These topics have also been examined together—exploring the relationship between self-concept and depression. Self-concept and depression are interrelated and intertwined (Beck, 1972; Blatt & Bers, 1993; Fitts, 1965).

Individuals’ self-concept is key to the experience of depression, and depression always involves a component of the self. Persons experiencing depression often set unrealistic standards for themselves and make harsh judgments about themselves. These unrealistic standards and harsh judgments often lead them to view themselves as inadequate and worthless which tears down their self-concept. Depressed individuals also tend to extend their negative view of themselves to include their surrounding world and their future which Beck calls the cognitive triad (Beck, 1967, 1973; Fitts & Warren, 1996; Prochaska, DiClemente, & Norcross, 1992).

Transitions in life are turning points that all individuals experience such as starting college or graduate school. One’s self-concept tends to be in a period of re-examination, expansion, and solidification during these transition points. These times of transition can be times for growth in the way persons perceive themselves, their surrounding environment, and the way they interact with that environment. Choosing a career and academic success in preparing for that career are very important components of this time of transition, which is a developmental task for the late adolescent and the young adult (Alfeld-Liro & Sigelman, 1998; Sprinthall, Bertin, & Whiteley, 1986).
The school environment is very important in the development of the self-concept. The social aspect of peer relationships in school can be a feedback source for the developing sense of self. Those students who develop a positive self-concept in academic areas have a better chance of succeeding in later life. A major developmental task of late adolescents and young adulthood is solidifying a self-identity. During this period, late adolescents and young adults are making major decisions in relation to self, family, career, relationships, marriage, and religion (Frydenberg, 1997; Lucas, 1997; Magen, 1998).

Undergraduate students tend to be experiencing separation from family, friends, and other means of support while trying to adapt to a new environment, values, and activities. They are at a stage of transition which lends itself to exploring new values, behaviors, and relationships. Often, undergraduate students are heavily influenced in their career choice by the expectations of their family (Felix, 2000; Lent, Brown, & Hackett, 2000; Lucas, Skokowski, & Ancis, 2000).

Graduate students tend to be more self-directed in their learning and study skills. Often, their attendance in graduate school comes out of their own level of motivation and their strong sense of self. Graduate students have often explored the existential questions surrounding the meaning and purpose in life and have the desire to continue to explore those questions. Thus, they may tend to have a higher level of self-concept and a lower level of depressive symptoms (Steer, Ball, Ranieri, & Beck, 1999; Wong & Whitaker, 1993).

Approximately 60-75% of high-school graduates enter a university setting during the first year following graduation. Half of these individuals obtain some type of degree
within 5 years, and approximately 25% obtain a bachelor's degree or higher. It has been estimated that 30-60% of first-year college students leave school and as high as 50% during the total undergraduate years. Approximately 33% of individuals who do complete college will enter graduate school the following year (Arnett, 2000; Gladieux & Swail, 2000). U.S. universities tend to annually award approximately 387,000 master's degrees and 41,000 doctoral degrees. It is estimated that up to 50%, with as high as 65%, of entering graduate students do not complete their Ph.D. degree (Gumport, 1999).

Students often leave college by their own decision. Approximately, 85% of student withdrawals are voluntary. Students may leave because they are not navigating the transition period very well and feel isolated. These feelings of isolation and loneliness can contribute to a decrease in self-concept and an increase in depressive symptoms. Depression, especially mild depression, is common in college students. If they have a low self-concept or feelings of depression, then they may have trouble being in a new environment, concentrating on school, making personal and career choices, making new friends, and making commitments to lifetime goals. These areas of difficulty may have a long-term impact on individuals (Haines, Norris, & Kashy, 1996; Kutcher, Marton, & Boulos, 1993; Maier, Gansicke, & Weiffenbach, 1997; Munoz, Hollon, McGrath, Rehm, & VandenBos, 1994; Padula, Conoley, & Garbin, 1998).

Depression is often reported to be the leading emotional or psychiatric disorder found on university campuses. Depression, even if the depressive symptoms are mild or moderate, tends to be associated with decreased learning and academic performance, increased attrition rates, increased drug and alcohol usage, increased suicide rate, impaired
social skills, and impaired parenting skills. It is vital that the symptoms of mild depression be acknowledged and addressed before they become more persistent and develop into a likely pattern of major depression. Universities can take an important step in recognizing depressive symptoms and offering excellent care for their students in the university counseling center (Bertoia, 1992; Feaster, 1996; Felix, 2000; Strauss, 1998).

Student retention tends to be better for all involved—the student and the university. Obtaining a college degree tends to be the standard just like obtaining a high-school diploma was previously in the century. College attendance opens the door for individuals to have a chance at the best jobs and the best chances in life. There are numerous variables that play into the rate of attrition or retention such as grades, developing a positive sense of self, level of depression, increasing participation in decisions, making and maintaining supportive relationships, and an increasing sense of belonging within the university environment (Gladieux & Swail, 2000; Melendez, 1997).

The key to student retention is what the university can offer to facilitate the growth and success of its students. Faculty and administrative personnel can take an interest in students and aid in decreasing the attrition rates. They can help to motivate and affirm the students. The university and its counseling center might develop what Beeber (1999) calls "anticipatory intervention programs." These anticipatory intervention programs might include an evaluative screening process of the incoming students for levels of self-concept and symptoms of depression, workshops, and/or seminars on self-concept, depression, and other relevant topics. When students learn about different areas, they expand their sense of self, find their talents, and broaden their goals for the future. Also, psychologists in the
university counseling center can help them explore their intrapersonal issues, interpersonal conflicts, time-management skills, social skills, stress management skills, career interests, study skills, and decision-making skills. Students can take some time to examine these issues and decrease their level of depression and increase their level of self-concept (Lewinsohn, Antonuccio, Steinmetz, & Ten, 1984; Wilson, Mason, & Ewing, 1997).

**Statement of the Problem**

Research is well represented on the topics of self-concept and depression, individually and together. After reviewing the current literature, few specific studies have been noted that explore the potential differences in undergraduate and graduate students in relation to their level of self-concept and level of depression. Starting college or graduate school is a time of transition and students have an opportunity for personal growth as they learn more about themselves and the world around them. But this opportunity for personal growth can be colored by their level of self-concept and depression. If students have low self-concept and/or symptoms of depression, then they may have trouble being in this new environment, making new friends, concentrating on school, making personal and career choices, and/or making commitments to lifetime goals (Berzonsky & Kuk, 2000; Clark & Beck, 1999; Felix, 2000; Grayson & Meilman, 1999; National DMDA, 2000; National Institutes of Health [NIH], 2000a).

Depression, especially mild depression, is on the rise for young adults on today's university campuses and is often reported to be the leading emotional or psychiatric disorder. College students tend to experience clinical depression and dysthymia twice as
often as working individuals of similar ages and background environments. Also, when depression occurs then there is also an increased risk of suicide. Suicide has increased dramatically in young adults over the last few years and it has been reported to be the second leading cause of death on university campuses. In fact, some researchers have noted that suicide is approximately twice as high in students when compared with non-students of the same age (American Psychiatric Association, 2000; Chang, 2000; Chang & Rand, 2000; DeAngelis, 2001; Dixon, 2000; Dixon & Reid, 2000; Hayes, 2000; McIntosh, 2000; NIMH, 1999; NIH, 2000b).

Universities can take an important step in recognizing depressive symptoms and offering excellent care for their students in the university counseling center. A university might incorporate an evaluation of self-concept and depression into the screening process of incoming undergraduate and graduate students via the counseling center as a type of anticipatory intervention program. Identified students struggling with low self-concept and/or symptoms of depression might receive individual therapy, group therapy, and/or training through workshops to aid in increasing the level of self-concept and lowering symptoms of depression. Another form of an anticipatory intervention program, if a screening process is not utilized, might be for psychologists to provide workshops and seminars for students on a range of topics such as personal, social, and academic issues, self-concept, and depression. These types of anticipatory intervention programs could assist individuals in building a more positive sense of self so they can be more productive in school and in life (Beeber, 1999; Gladieux & Swail, 2000; Hermon & Hazler, 1999; O’Connor, 2001; Rundle, 2000).
Psychologists can greatly influence and assist students in their personal and professional growth. One way psychologists can assist students is by helping them to instill hope and to build a variety of strengths. Seligman (1998) offers examples of instilling hopefulness and building strengths as “courage, interpersonal skill, rationality, insight, optimism, honesty, perseverance, realism, capacity for pleasure, putting troubles into perspective, future mindedness and finding purpose” (p. 2).

Purpose of the Study

The purpose of this study is to compare undergraduate and graduate students with respect to their level of self-concept and level of depression.

Research Questions

This research project examined the following questions:

1. Do undergraduate and graduate students differ in respect to the level of depression?
2. Do undergraduate and graduate students differ in respect to the level of self-concept?
3. Do students at different depression levels differ in the level of self-concept?
4. Is the relationship between self-concept and depression different for undergraduate and graduate students?

Research Hypotheses to Be Examined

The general hypotheses upon which this research study is based are as follows:
1. There will be a significant difference between undergraduate and graduate students with regard to the level of depression.

2. There will be a significant difference between undergraduate and graduate students with regard to the level of self-concept.

3. There will be a significant difference among students at different depression levels with regard to the level of self-concept.

4. There will be a significant difference in the relationship between self-concept and depression for undergraduate and graduate students.

The null hypotheses for this study are presented in Chapter 3.

**Theoretical Frameworks**

This research study draws from two main theorists in examining the topics of self-concept and depression: William Fitts and Aaron Beck. The following sections provide an overview of their theories of self-concept and depression.

**Self-Concept Theory**

**William Fitts**

Fitts (1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996) described the self-concept as a complex and a very personal and private belief individuals hold about themselves and cannot be described by a single score or label. He believed that the self-concept is an important component of human behavior and placed self-esteem as an important evaluative component of the self-concept. The self-concept is the lens through which individuals look at themselves, relationships, and the
world around them. The self-concept is also the lens through which individuals look at information about other persons such as their thoughts, feelings, relationships, and mental health. Fitts believed that the self-concept, in an emotionally healthy person, was positive and basically consistent and stable across the different dimensions. But, some variability of the self-concept might occur based on the value or importance that the individual places on that specific level of self-concept at that current time (other sources which discuss Fitts' theory can be found in the following: Bishop, Walling, & Walker, 1997; Duprez, 1987; Fleming & Courtney, 1984; Gaber, 1984; Lang & Vernon, 1977; Roid & Fitts, 1989; Shirley, 1990; Workman, Bloland, Grafton, & Kester, 1986-87).

Fitts (1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Roid & Fitts, 1989) reported that individuals' self-concept is vital to communication and interpersonal relationships. When persons feel good about themselves then they are more open to the thoughts and feelings of others and can be more open to accepting of the individual differences. A positive self-concept also assists individuals in their quest for greater self-actualization, more fulfilling lives, and an overall better society. In fact, Fitts believed that the self-concept of individuals today was a good baseline for their future success in life (other sources which discuss Fitts' theory can be found in the following: Hoffman & Gellen, 1983; Keith & Bracken, 1996; Marsh & Richards, 1988; McGuire & Tinsley, 1981; Roffe, 1981; Workman et al., 1986-87; Wylie, 1974).

Fitts (1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Roid & Fitts, 1989) described the self-concept as being comprised of two main components: the judging self and the behavioral self. He further delineated these two
main components into two sections: internal frame of reference (judging self) and external frame of reference (behavioral self). In fact, he utilized this basic premise in the design of his self-concept scale, the Tennessee Self-Concept Scale (TSCS), in 1965. The internal frame of reference contained three levels (Identity, Self-Satisfaction, Behavior) and the external frame of reference contained five levels (Physical, Moral, Personal, Family, Social) (other sources which discuss Fitts' theory can be found in the following: Archambault, 1992; Bolton, 1976; Boyle & Larson, 1981; Burns, 1979; Buros, 1972; Byrne, 1996a; Levin, Kari, & Frankel, 1978; Marsh & Hattie, 1996; Mitchell, 1983; Murphy, Conoley, & Impara, 1994; Pound, Hansen, & Putnam, 1977; Robinson & Shaver, 1973; Stein, 1996; Tzeng, Maxey, Fortier, & Landis, 1985; Vacchiano & Strauss, 1968).

Even with subsequent revisions, the TSCS continues to be widely used and cited in the literature. For example, Reed, Fitts, and Boehm (1980) listed approximately 1,350 TSCS references just for the years 1965-1980.

**Depression Theory**

**Aaron Beck**

In his clinical endeavors, Beck (1967, 1991; Beck, Steer, & Garbin, 1988) was unable to support the psychoanalytic theory's premise that depression was anger turned inward. So, he started trying to find other ways to explain the symptoms of depression in his clients. In 1961, Beck, Ward, Mendelson, Mock, and Erbaugh developed the Beck Depression Inventory (BDI) as a way to measure depression. In 1967, Beck originally published his cognitive theory of depression (other sources which discuss Beck's theory...
can be found in the following: Barkham et al., 1996; Baron & Campbell, 1993; Berndt & Burgy, 1996; Byrne & Baron, 1993; Byrne, Baron, & Balev, 1998; Flett, Vredenburg, & Krames, 1995; Goldston, O’Hara, & Schartz, 1990; Gorenstein, Pompeia, & Andrade, 1995; Gotlib, 1984; Hammond & Romney, 1995; Hatzenbuehler, Parpal, & Matthews, 1983; Hill, Kemp-Wheeler, & Jones, 1986; Joseph, Lewis, & Olsen, 1996; Kendall, Hollon, Beck, Hammen, & Ingram, 1987; Lips & Ng, 1985; Miranda & Munoz, 1994; Scheier, Carver, & Bridges, 1994; Stehouwer, 1985; Wiseman & Gutfreund, 1995).

Beck’s (1967, 1972, 1976, Beck, Rush, Shaw, & Emery, 1979) cognitive theory of depression proposes that depression contains three elements which are necessary for its beginning and maintenance: the cognitive triad, silent assumptions, and logical errors. The cognitive triad maintains that depressed individuals hold a negative outlook about themselves, their world, and their future. Depression is not mainly a problem with mood but a result of the negative way one views the elements of the cognitive triad. This negative outlook contributes to, upholds, and/or intensifies the symptoms of depression based often on the representation of loss. In fact, depressed people tend to have a systematic, negative way of thinking which colors the way they view themselves, the world, and their future (other sources which discuss Beck’s theory can be found in the following: Alford & Beck, 1997; Brown, Bifulco, & Andrews, 1990a; Curtis, 1990; France & Robson, 1997; Hammen, 1978; Jarrett & Rush, 1996; Klermon, 1987; Kuiper, MacDonald, & Derry, 1983; Lewinsohn & Rohde, 1987; Maddux & Meier, 1995; Mendels, 1970; Rehm, 1995; Robinson, Berman, & Neimeyer, 1990; Williams, 1984).

The first element of Beck’s cognitive theory of depression (Beck, Freeman, &
Associates, 1990; Beck et al., 1979) is the cognitive triad. The first component of this cognitive triad is a negative view of self. This element of Beck's model was influenced by the psychoanalytic idea of the loss of self-esteem. Persons who are experiencing depression tend to view themselves as inferior, inadequate, unqualified, unworthy, incomplete, and/or impaired in emotional, moral, or physical character. These individuals believe that they have physical, mental, or moral deficits which account for the unpleasant experiences. They tend to criticize themselves frequently. Their attributions toward their perceived inadequacies lend them to judge themselves to be personally unworthy. Because of this perceived personal unworthiness, they believe that they lack the ability to attain happiness and fulfillment and expect failure and rejection. Their negative view of themselves lends itself to establishing a foundation for negative views of the world and the future (other sources which discuss Beck's theory can be found in the following: Bemporad, 1995; Burns & Beck, 1978; Chang & Rand, 2000; Clark & Beck, 1999; Duprez, 1987; Kernis et al., 1998; Lightsey & Christopher, 1997; Roba, 1988; Rush, 1987; Rush & Giles, 1982).

The second component of the cognitive triad (Beck et al., 1990; Beck et al., 1979) is a negative view of the world. In light of their perceived inadequacies, they then interpret interactions with others and the environment as evidence for disappointment and loss. These individuals tend to see the world as blocking their ability to reach life goals. They tend to misinterpret these interactions in a consistently negative way. This evidence then supports the ideas of criticism, distress, and increased dependency on others and the environment. They may tend, when comparing themselves to others, to minimize positive
experiences and emphasize failures (other sources which discuss Beck's theory can be found in the following: Carver, 1998; Clark, Beck, & Stewart, 1990; Duprez, 1987; Rush, 1987; Rush & Giles, 1982; Young, Beck, & Weinberger, 1993).

The final component of the cognitive triad (Beck et al., 1979) is the negative view of the future. Depressed persons view the future as worthless and empty. They also view the future as one in which their current problems will always continue and they expect failure. They may then succumb to being more dependent on others due to perceived personal inadequacy. Depressed persons believe the future holds failure and/or other negative outcomes (other sources which discuss Beck’s theory can be found in the following: Duprez, 1987; Lightsey & Christopher, 1997; Roba, 1988; Rush, 1987; Rush & Giles, 1982).

The second element of Beck’s cognitive theory of depression (Beck et al., 1979) is silent assumptions. Silent assumptions or “schemas” are unspoken ideas, beliefs, or rules that individuals hold which influence their thoughts, feelings, and behaviors. Schemas tend to be stable cognitive patterns because they comprise the baseline from which one screens and assimilates information about self, others, and the environment. Initially, children learn to evaluate themselves and the world through interaction with significant others and or the environment which builds reality or cognitive patterns. Adults then base their feelings and behaviors on these unspoken ideas. These schemas then lend themselves to automatic thoughts. Depression and relapse episodes often result from the arousal of these schemas. Therefore, schemas help to maintain one’s level of depression (other sources which discuss Beck’s theory can be found in the following: Bacon, 1993; Barnett & Gotlib,
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In everyday life, persons are guided by the templates of the cultural, religious, family, gender, and age-related schemas which are developed from the experiences gathered throughout the years. Schemas are involved in the process of memory, thoughts, feelings, motivation, and behavior (Beck et al., 1979; Bemporad, 1995; Bricker, Young, & Flanagan, 1993; Duprez, 1987; Freeman, 1993; Muran & Safran, 1993; Roberts & Monroe, 1994). As individuals face a specific situation, schemas are activated which are related to that situation. The activated schemas then act as a guide to the incoming information to which they evaluate the data or experience. Persons prone to depression, once schemas have been triggered by some stress, begin to view themselves, the world, and their future in a manner that is unrealistic and demeaning. Once the negative self-schemas are utilized to process information, the individuals overestimate the negative aspects of themselves and the situation (Alden, Bieling, & Meleshko, 1995; Beck et al., 1990; Beck et al., 1979; Craig & Dobson, 1995; Eaves & Rush, 1984; France & Robson, 1997; Hirschfeld & Cross, 1987; Rizley, 1978; Williams, 1984; Young et al., 1993).

The third element of Beck's cognitive theory of depression (Beck, 1991; Beck et al., 1990; Beck et al., 1979) is logical errors. Logical errors or structural errors in thinking are created by the negative automatic thoughts which the depressed persons hold about themselves, the world, and the future. These logical errors lead to the misinterpretation of
events and reinforcement of the cognitive triad. Depressed individuals use these logical errors to maintain their belief that the negative concepts are valid in spite of conflicting evidence. Logical errors include: arbitrary inference, selective attention, overgeneralization, magnification or minimization, personalization, and dichotomous thinking (other sources which discuss Beck's theory can be found in the following: Carver, 1998; Craighead, Craighead, Kazdin, & Mahoney, 1994; France & Robson, 1997; Head, 1978; Jarrett & Rush, 1996; Joseph, 1987; Kovacs & Beck, 1978; Williams, 1995).

Arbitrary inference refers to persons making a conclusion without evidence to support that conclusion. Selective abstraction or attention consists of individuals focusing on a detail, which is out of context, while disregarding other noticeable aspects of the situation. Then they conceptualize the entire experience based on that one detail.

Overgeneralization is the tendency to draw a conclusion based on one or more single events and then applying that conclusion to all related and unrelated situations.

Magnification and minimization are ways in which persons give extraordinary emphasis to a given part of an event and draw a mistaken conclusion from that event. Personalization is the individual's tendency to connect external events to themselves without grounds for making any such association. Dichotomous thinking is the tendency to think in a concrete way such as, for example, black and white without any gray areas or all or nothing. The persons then place all events in one of the two opposite categories. Depressed individuals tend to choose the most negative category to describe themselves (Beck et al., 1979; France & Robson, 1997; Joseph, 1987; Kovacs & Beck, 1978; Rehm, 1990; Rush, 1987; Williams, 1984; Zimbardo & Leippe, 1991).
From the review of the above-mentioned theoretical frameworks of self-concept and depression, it can be summarized that these two subjects are vital to the better understanding of individuals and how they view themselves and relate to others. In the present study, undergraduate and graduate students are considered in regard to the potential differences in their level of self-concept and depression and how those differences can affect their current and future life choices.

Significance of the Study

Students enter a university setting from a fast-paced society that tends to demand a strong sense of self and a feeling of competency. Throughout the different stages in life, individuals examine the question "Who am I?" Changes in their lives, such as moving away from home, starting college or graduate school, exploring new values, and/or making new friends can trigger a period of re-examination of the self. Individuals view the entire world through their filter of self which influences all of their thoughts, feelings, and behaviors. This filter of self is a person's self-concept and contains the beliefs about your personal worth, characteristics, and roles. Individuals with a high level of self-concept tend to think well of themselves and others, value relationships with others, more easily accept differences in others, obtain a higher level of performance in the academic setting, and have lower levels of hopelessness and depression (Chang, 2000; Dunning, 1993; Felix, 2000; Fitts & Warren, 1996; Hattie & Marsh, 1996; Magen, 1998; Rosenberg, 1985).

As mentioned above, persons with higher levels of positive self-concept tend to have lower levels of hopelessness and depression. This is an important point because the
literature shows that self-concept and depression are interrelated and intertwined. During times of depression, most individuals begin to set unrealistic standards, make self-belittling remarks, or make harsh judgments about themselves. Often these events lead them to see themselves as basically worthless, hopeless, and inadequate. One’s level of self-concept and depression influences areas such as relationships, academic achievement, choosing to obtain a graduate level of education, choosing a career, and/or making commitments to lifetime goals (Beck, 1967, 1972, 1973, 1976; Clark & Beck, 1999; NIH, 2000a, 2000b; NIMH, 2000; Roid & Fitts, 1989).

Depression is a topic that is discussed many times without connecting it necessarily to self-concept. In fact, depression is called “the common cold of mental health.” Depression often starts with mild symptoms in late adolescence/young adulthood and, with time, may slowly increase in the level of severity. Thus, persons with mild depressive symptoms tend to be at a higher risk for developing more severe depression. Even if individuals are experiencing mild depressive symptoms which do not meet specific diagnostic criteria for a mood disorder, their ability to function may be hindered in areas such as relationships with others, physical health, academic/work performance, making personal and career choices, and feelings of self-worth. If left untreated, these mild symptoms may persistently recur and may eventually build a lifelong pattern of depressive symptoms and/or pattern of major depression. Therefore, it is vital that the symptoms of mild depression be acknowledged and addressed before they become more persistent (American Psychiatric Association, 2000; Beck, 1967, 1972, 1973, 1976; Clark & Beck, 1999; Feaster, 1996, Felix, 2000, Fitts, 1965; Hattie, 1992; Johnson, 2001; National
Definitions of Terms

The following section defines terminology as it is used in the present study:

*Self-Concept:* How one views oneself as an overall person as measured by the Tennessee Self-Concept Scale: Second Edition (TSCS:2); basically what one thinks about oneself.

*Self-Esteem:* One component of self-concept; the evaluative part of the self-concept; basically what one feels about oneself.

*Depression Groups:* Scores of the students which fall within one of the four groups or diagnostic ranges of the Beck Depression Inventory-II (BDI-II) as presented by Beck, Steer, and Brown (1996): (1) 0-13 Minimal; (2) 14-19 Mild Range; (3) 20-28 Moderate Range; (4) 29-63 Severe Range.

*Depression:* Using the four BDI-II groups, a cut score of 13 is used to designate nondepressed and depressed students. So, Minimal/Nondepressed Range (0-13) represents nondepressed (ND); Mild Range (14-19) represents mild symptoms of depression; Moderate Range (20-28) represents moderate symptoms of depression; and Severe Range (29-63) represents severe symptoms of depression.

*Undergraduate students:* Students who are currently enrolled in undergraduate classes in a university setting; ages 18-24.

*Graduate students:* Students who have completed a 4-year college degree and are currently enrolled in a graduate degree program; ages 25 and over.
Delimitations of the Study

This study employed a convenience sample of undergraduate and graduate students from Andrews University (AU) and Western Michigan University (WMU). The students were not randomly assigned but were asked to volunteer to participate in the study while enrolled in specific courses. Therefore, the results of this study are generalizable only to undergraduate and graduate students in Midwestern university settings.

Organization of the Study

Five chapters are contained in this study.

Chapter 1 presents an introduction to the research project, background, statement of the problem, purpose of the study, research questions, research hypotheses to be examined, theoretical frameworks, self-concept theory, depression theory, significance of the study, definition of terms, and delimitations of the study.

Chapter 2 contains a survey of the literature that focuses on theories of self-concept, self-concept, theories of depression, depression, self-concept and depression, and undergraduate and graduate students.

Chapter 3 describes the methodology, which includes the introduction, population and sample, variables, instrumentation, data collection, and null hypotheses, methods of analysis, and power analysis.

Chapter 4 presents the data and analysis.

Chapter 5 provides an introduction, summary, discussion of the results, conclusions, recommendations for research, and implications for practice.
CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter covers a comprehensive review of the literature relevant to this research study: theories of self-concept, self-concept, theories of depression, depression, self-concept and depression, and undergraduate and graduate students.

Theories of Self-Concept

The following section provides an overview of the most prevalent theories of self-concept.

James

Early in the process of psychology becoming a scientific discipline, William James initially brought the focus on the self to the forefront of psychology (Backman, Secord, & Pierce, 1982; Dyk & Adams, 1987; Hansen & Maynard, 1973; Morton, 1984; Rosenberg, 1989; Wells & Marwell, 1976). James’s book in 1890, The Principles of Psychology, explored the role of the self. This interest in the self continues to be of interest today (Anderson, 1992; Burns, 1979). James began his writings on the self with a broad definition: “In its widest possible sense, however, a man’s Self is the sum total of all that
he CAN call his” (James, 1890, p. 291). James also widened his definition of the self to include the I-Me dichotomy which is divided into two aspects: the “known” and the “knower” (Hart & Damon, 1985; Wells & Marwell, 1976).

James described the self as the known and the knower. The self as known is the components of the self and the self as knower is involved with the development and alteration of the self-concept and how the self-concept influences one’s perception (Morrel, 1983; van der Werff, 1990; Wells, 1992). James called the “I” the knower or “pure ego” and the “Me” the known or empirical self. The known or empirical self is all that one calls his/her own. James divided the empirical self into the spiritual self, the material self, and the social self (Bednar et al., 1989; Coopersmith, 1990; Epstein, 1980; Fitts et al., 1971; Frey & Carlock, 1989; Hansen & Maynard, 1973; Harter, 1996; Hattie, 1992; Hormuth, 1990; James, 1890, 1985; Levin, 1992; Samuels, 1977; Sarbin, 1952; Strauman & Higgins, 1993; Walsh & Banaju, 1997; Wylie, 1974).

One’s spiritual self is the source of will and choice, curiosity, activity, and interest. James viewed the spiritual self as the core self because he felt it was the most constant and innermost part of the self. The material self is one’s body, family, property, and possessions such as clothes. The social self is connected to social interaction and the need to have recognition from others. James believed that we have many social selves and the social self or me develops from the acceptance that we receive from others (Bednar et al., 1989; Coopersmith, 1990; Frey & Carlock, 1989; Harter, 1996; Hattie, 1992; Hormuth, 1990; James, 1890, 1985; Levin, 1992; Natsoulas, 1998; Strauman & Higgins, 1993; Walsh & Banaju, 1997).
Rogers

Rogers (1942, 1951) believed that individuals strive to enhance and actualize themselves and called it the "self-theory." Persons have a need for positive regard for themselves and from others. Relationships based on unconditional positive regard are based on mutual empathic understanding (other sources which discuss Roger’s theory can be found in the following: Epstein, 1973; Fernald, 2000; Fitts et al., 1971; Frey & Carlock, 1989; Hansen & Maynard, 1973; Hattie, 1992; Rice, Ashby, & Slaney, 1998; Samuels, 1977; Watkins, 1981). Rogers (1951) stated that the self-concept or self-structure is an organized configuration of perceptions of the self which are admissible to awareness. It is composed of such elements as the perceptions of one's characteristics and abilities; the percepts and concepts of the self in relation to others and to the environment, the value qualities which are perceived as associated with experiences and objects; and goals and ideals which are perceived as having positive or negative valence. It is, then, the organized picture . . . of the self. (p. 501)

Rogers (1942, 1951) thought that bringing one’s self-concept closer in line with one’s true desires was part of effective client-centered therapy. He thought this was so important because one’s self-concept guides the actions, provides a sense of self, and gives a sense of continuity. Individuals are striving to become and remain authentic (other sources which discuss Roger’s theory can be found in the following: Allen, 1990; Bednar et al., 1989; Coopersmith, 1990; Fitts, 1972a; Gergen, 1982; Hamachek, 1971; Hansen & Maynard, 1973; McCrae & Costa, 1982; Morton, 1984; Rosenberg, 1989; Wells & Marwell, 1976; Wylie, 1961, 1974).
Maslow

Maslow (1954, 1959) believed the highest need human beings strive for is "self-actualization." He portrayed the needs in a hierarchy as follows: physical needs, safety needs, belongingness and love needs, esteem needs, and self-actualization needs. Due to the hierarchical structure of these needs, the higher needs such as esteem and self-actualization can be fulfilled only when the lower needs have been acknowledged and satisfied (other sources which discuss Maslow's theory can be found in the following: Allen, 1990; Bee, 1987; Burns, 1979; Fitts, 1970, 1972b; Fitts et al., 1971; Frey & Carlock, 1989; Hamachek, 1971; Magen, 1998; Myers, Sweeney, & Witmer, 2000; Papalia & Olds, 1992; Samuels, 1977; Schultz & Schultz, 1994; Stevens-Long, 1990; Stevens-Long & Commons, 1992; Treadgold, 1999; Wylie, 1974).

Erikson

One of the most well-known theories for describing the stages for growth of the self-concept is by Erikson. Erikson's model (1959, 1968) explored the question of "Who am I?" in his universal eight stages of life: (1) trust versus mistrust (infancy, Birth-1 year); (2) autonomy versus shame and doubt (early childhood, 1-3 years); (3) initiative versus guilt (prepuberty, 3-5 years); (4) industry versus inferiority (puberty, 6-11 years); (5) identity versus role confusion/diffusion (adolescence, 12-18 years); (6) intimacy versus isolation (early adulthood, 18-35 years); (7) generativity versus stagnation (middle adulthood, 35-55 years); and (8) ego integrity versus despair (old age, 55 years and older) (other sources which discuss Erikson's theory can be found in the following: Anderson &

The universal stages of development are "normal crisis points" and are expected to occur for all individuals. Although each stage is correlated with a certain age period, Erikson (1959, 1963, 1965) also states that these age periods have a certain degree of flexibility. For example, the search for identity is a lifelong process and an important stage because it can affect the rest of one's decisions in life. Identity comes into focus during adolescence, which Erikson viewed as lasting until the mid-20s, as it did in his life until the age of 25 (other sources which discuss Erikson's theory can be found in the following: Archer, 1982; Arnett, 2000; Birnie-Lefcovitch, 1996; Burns, 1979; Calhoun, Glaser, & Bartolomucci, 2001; Cote & Levine, 1988; Dusek & Flaherty, 1981; Erikson, 1959, 1968; Frydenberg, 1997; Grayson & Meilman, 1999; Jackson & Bosma, 1990; Kroger, 1989; Kroger & Haslett, 1991; Levy-Warren, 1996; Lucas, 1997; Magen, 1998; Marcia, 1987; Rangell, 1990; Regeth, 1997; Rosenberg, 1985, 1986; Schultz & Schultz, 1994; Settlage, 1990; Tesser & Campbell, 1983; van der Werff, 1990; Weigart, 1983).

Erikson (1959, 1965) strongly believed that one's sense of identity is ever-changing throughout all stages of life. Thus, persons need to successfully master each specific task in every stage before the next stage ideally can be successfully mastered. These crisis points have the potential of allowing persons to evaluate themselves and transform their self-concept (other sources which discuss Erikson's theory can be found in the following:}

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Early self-concept instruments were characterized as unidimensional with an emphasis on global self-concept such as the Rosenberg Self-Esteem Scale (Reynolds, Ramirez, Magrina, & Allen, 1980; Rosenberg, 1985, 1986; Rosenberg & Pearlin, 1982; Savin-Williams & Jaquish, 1981; Shevlin, Bunting, & Lewis, 1995; Strein, 1993). Today, most researchers accept that self-concept is multidimensional. Since the mid-1970s, most self-concept instruments examine several facets of the self-concept in addition to a global component (Bishop et al., 1997; Bosson & Swann, 1999; Byrne, 1996a; Gray-Little & Williams, 1997; Hoge, 1999; Klar, 1992; Marsh & Hattie, 1996; Marx & Winne, 1980; Prout & Prout, 1996).

Shavelson, Hubner, and Stanton (1976) developed a hierarchical and multifaceted model of self-concept. Their model contains domain-specific self-esteem elements, for example, social, physical, emotional, and academic self-concepts (other sources which discuss Shavelson et al.'s model can be found in the following: Bracken & Mills, 1994; Byrne, 1984; Fleming & Courtney, 1984; Hattie, 1992; Hoge, 1999; Marsh, 1989, 1993; Marsh, Barnes, & Hocevar, 1985; Marsh, Byrne, & Shavelson, 1988; Marsh & Hattie, 1996; Marsh, Hey, Roche, & Perry, 1997; Marsh & Smith, 1982; Marx & Winne, 1978; Roid & Fitts, 1989; Shavelson & Bolus, 1982; Strein, 1993; Wylie, 1989).
Self-Concept

The human race has always been interested in interpreting and understanding themselves. The concept of the self or individuality is an essential interest to philosophers, scholars, politicians, educators, and psychologists. Two famous philosophers, Socrates and Shakespeare, wrote about the importance of the self. Socrates emphasized the importance of knowing yourself as demonstrated by his famous words “Know thyself” and “An unexamined life is not worth living” (as cited in Hergenhahn, 1992, p. 37). Shakespeare also emphasized the importance of knowing yourself in the play Hamlet: “This above all: To thine own self be true.” Lev 19:18 (KJV) also touches on the premise of the importance of the self-concept: “Thou shalt love thy neighbour as thyself.” as well as Prov 23:7 (KJV) “For as he thinketh in his heart, so is he . . . .”

Curiosity about the self and the human need is to be connected to self and others are considered basic human needs (Anderson et al., 1997; Bishop et al., 1997; Branden, 1994; Fitts, 1965, 1972a, 1972b; Fitts & Warren, 1996; Gray-Little & Williams, 1997; Hattie, 1992; Snodgrass & Thompson, 1997; Snyder & Campbell, 1982; Thompson, 1997). In fact, one’s self-concept is an essential and practical feature of human existence. The thirst for knowledge about ourselves, the longing for a purposeful identity, the search for answers to questions such as “Who am I?” and “How can I find me?” are components of the self. Self-help books are very numerous on the topic of the self and address, for example, topics such as finding ourselves, liking ourselves, and interacting with others. We want to be unique as persons as our individual sense of self distinguishes ourselves from others and gives meaning to how we view our experiences and how we live our lives.
The self is the content of conversation, debate, and investigation in daily life. Although, the self is an essential interest to many people, it is not easily defined (Bandura, 1982; Gergen, 1982; Suls & Mullen, 1982). James (1890) began the emphasis on the self in psychology with his book, *The Principles of Psychology*. He described the self as the "known" and the "knower." The self as known is the different parts of the self and the self as knower deals with the development and changing of the self-concept and how perceptions are influenced by self-concept. Kinch (1963) stated, "The self-concept is that organization of qualities that the individual attributes to himself" (p. 481).

Rosenberg (1979) defined self-concept as "the totality of the individual's thoughts and feelings having reference to himself as object" (p. 7). Branden (1994) defined self-concept this way: "Our self-concept is who and what we consciously and subconsciously think we are--our physical and psychological traits, our assets and liabilities, possibilities and limitations, strengths and weaknesses" (p. 15). Coopersmith (1990) defined self-esteem, an evaluative component of the self-concept, as the evaluation that the individual makes and customarily maintains with regard to himself; it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy. In short, s-e is a *personal* judgment of worthiness that is expressed in the attitudes the individual holds toward himself. (pp. 4-5)
In today's literature, often the terms self, self-concept, and self-esteem are used interchangeably within the literature. Terms often used for self-concept include self-identity, sense of self, self, self-perception, self-awareness, self-worth, and self-image. Terms often used for self-esteem include self-respect, self-acceptance, self-regard, and self-evaluation (Burns, 1979; Byrne, 1996b; Frey & Carlock, 1989; Hattie, 1992; Rosenberg, 1979, 1989; Wells & Marwell, 1976). For this research, I do not use these two words interchangeably. The self-concept is all-encompassing and includes the self-esteem (Branden, 1994; Byrne, 1996a; Elliott, 1986; Fitts, 1965; Fitts et al., 1971; Fitts & Warren, 1996; Fleming & Courtney, 1984; Frydenberg, 1997; Hoge, 1999; Kagan, 1998; Maddux & Meier, 1995; Novick, Cauce, & Grove, 1996; Roid & Fitts, 1989; Rosenberg, 1985; Shirley, 1990; Snodgrass & Thompson, 1997, van der Werff, 1990).

Self-esteem is the evaluative component of self-concept and is how one evaluates self and behaviors. In fact, self-esteem is used by individuals to judge or evaluate the behavioral, psychological, and cognitive components of their self-concept (Abel, 1996; Allen, 1990; Bachman, O'Malley, & Johnston, 1978; Campbell, Chew, & Scratchley, 1991; Christensen, 1981; Fitts, 1965, 1970; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Frey & Carlock, 1989; Greenwald, Bellezza, & Banaji, 1988; Hoge, 1999; Maddux & Meier, 1995; McGuire & McGuire, 1982; Roid & Fitts, 1989; Scheier et al., 1994; Siebert, 1996; Staub, 1980a; Wells, 1992). Hattie (1992) thought that high self-esteem occurs when “we consider aspects of our life as important and . . . we have the confidence to fulfill our expectations” (p. 54). Individuals with high self-esteem respect themselves, feel competent, successful, loved, and worthy, and have a sense of belonging.
Self-esteem is one of the most-often-used measured constructs in psychology research when looking at the self-concept (Fitts, 1965; Fitts & Warren, 1996; Gray-Little & Williams, 1997; Rosenberg, 1985; Samuels, 1977; Shirley, 1990; Wells & Marwell, 1976; Wylie, 1974).

A person's self-concept is the essence of what they feel, think, and how they see themselves. This sense of self is mainly a subjective perception but it is an essential part of the individual. In fact, many of the opinions about yourself cannot be directly observed but they comprise your self-concept. Self-concept contains the beliefs about your personal worth, characteristics, and roles (Bednar et al., 1989; Blatt & Bers, 1993; Byrne, 1984; Epstein & Koerner, 1986; Fiske & Chiriboga, 1990; Fitts, 1972a, 1972b; Glick & Zigler, 1985; Harwood, 1998; Kinch, 1963; Neisser, 1997; Polster, 1995; Roid & Fitts, 1989).

Self-concept includes how individuals think about their physical and emotional components, their potential, their limitations, and their strengths and inadequacies. Self-concept is what qualities or characteristics persons believe themselves to have in other areas such as relationships, spirituality, and professional aspirations. The self is the total of these qualities or characteristics of which I can share with others or how I describe myself to others. Self-concept also includes ethnicity, gender, physical characteristics, and the perception of how we are perceived by others (Arnstein, 1979; Basch, 1983; Cooper, 1993; Fennell, 1992; Hansen & Maynard, 1973; Levin, 1992; Levy-Warren, 1996; McGuire & McGuire, 1982; Moore & Britt, 1997; Perkins, 1994; Regeth, 1997; Rosenberg & Pearlin, 1982; Spitzer, Couch, & Stratton, 1971; van der Werff, 1990).

Persons run into new situations or experiences that are related to their existing view...
of their inner self which adds to the stability of the self-concept. Sometimes new situations or experiences are inconsistent with the existing view of their inner self and are likely to be rejected. The level of satisfaction with one's self-concept is important because it influences the degree to which new situations or experiences are incorporated or rejected. If individuals are highly satisfied with their self-concept, then they will tend to make active attempts to maintain the structure of their self-concept. If individuals are not highly satisfied with their self-concept, then they will tend to be more willing to consider elements of change in the structure of their self-concept, especially in a new or different environment (Bosson & Swann, 1999; Demo & Savin-Williams, 1992; Fitts, 1972b; Hormuth, 1990; Kaplan & Sadock, 1998; Markus & Kunda, 1986; Moore & Britt, 1997; Swann, 1983; Swann & Read, 1981).

Issues such as achievement in school, contentment with self, relationships with others, success in life, and happiness are related to the facets of how persons view themselves (Abel, 1996; Arnstein, 1979; Bednar et al., 1989; Bracken & Mills, 1994; Branden, 1994; Fitts, 1972b; Fennell, 1992; Hansen & Maynard, 1973; Hoge, 1999; Lazarus, 1991; Levy-Warren, 1996; Maslach, 1982; Roid & Fitts, 1989; Shavelson & Bolus, 1982; Whybrow, 1996; Workman et al., 1986-87). Individuals with positive self-concept value and accept themselves and have a sense of security. Persons with high self-concept tend to be more adaptable to changes in their daily life, have more insight, obtain a higher level of performance in the academic setting, can more easily accept differences in others, and have better functioning in society as a whole. They feel that they are more in control of their own lives and take hold of new opportunities in their lives. Persons with
negative self-concept tend to have low self-esteem. Persons with low self-concept tend to feel they are less in control of their own lives, less easily adapt to changes in daily life, and find it more difficult to tolerate the differences in others. They tend to take longer to take hold of new opportunities in their lives (Abel, 1996; Branden, 1994; Fitts, 1972a, 1972b; Frey & Carlock, 1989; Hamachek, 1971; Hattie, 1992; Hormuth, 1990; Maslach, 1982; Morton, 1984; Myers et al., 2000; Rosenberg, 1985; Salmela-Aro & Nurmi, 1997).

Self-concept is an overall summary of one's strengths, competencies, accomplishments, and deficiencies. Often, the overall summary includes the reactions and opinions of others called "reflected appraisals." The self-concept influences the establishing of short-term and long-term life goals (Allen, 1990; Arnstein, 1979; Christensen, 1981; Felson, 1993; Fitts, 1965; Fitts & Warren, 1996; Frydenberg, 1997; Gecas & Mortimer, 1987; Harter, 1996; Marsh et al., 1985; Resnick, Fauble, & Osipow, 1970; Salmela-Aro & Nurmi, 1997; Schafer & Keith, 1985; Shavelson & Bolus, 1982; Suls & Mullen, 1982; van der Werff, 1985). In fact, how you view yourself and evaluate yourself influences how you interact with others and what goals you pursue. The self-concept is a basis for behavior which is influenced by one's perception of himself/herself in relation to others and life experiences (Arnstein, 1980; Bishop et al., 1997; Craighead et al., 1994; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Futral, 1980; Kaplan & Saccuzzo, 1993; Maddux & Meier, 1995; Maslach, 1982; Roid & Fitts, 1989; Swann, 1983; Wells, 1992).

Self-concept is a cognitive appraisal about one's attributes. It is a set of beliefs and the connection between these beliefs that we hold about ourselves. The self organizes past
and present experiences and directs activity. The self is a resilient structure and a process -- stable yet capable of growth (Bruner, 1997; Ferrari, 1998; Fitts, 1965, 1972a, 1972b; Fitts et al., 1971; Fitts & Warren, 1996; Frydenberg, 1997; Hattie, 1992; Hirst, Manier, & Apetroaia, 1997; Hormuth, 1990; Kihlstrom & Klein, 1997; Markus & Kunda, 1986; Nemiroff & Colarusso, 1990; Rachlin, 1997; Roid & Fitts, 1989; Siebert, 1996; Silvernail, 1985). Stability is part of one's self-concept, but change is also a part. A person examines the question "Who am I?" at different times throughout his/her life. Changes in life, such as moving away from home, entering different stages of life, and losing a relationship, can color one's answer to such a question (Basch, 1983; Blustein & Palladino, 1991; Cheek & Hogan, 1983; Demo & Savin-Williams, 1992; Fitts, 1965, 1970; Fitts & Warren, 1996; Frey & Carlock, 1989; Hormuth, 1990; Jackson & Bosma, 1990; Levin, 1992; Levy-Warren, 1996; Mortimer & Lorence, 1981).

Self-concept is multi-faceted (Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Harter, 1996; Hattie, 1992; Keith & Bracken, 1996; Klar, 1992; Marsh & Smith, 1982; Rachlin, 1997; Roid & Fitts, 1989; Silvernail, 1985; Thompson, 1997). The effects of self-concept on self-esteem depend on whether one regards certain facets of one's self-concept to be important at that given time. One needs to value that facet of self-concept in order for it to affect the feelings of self-esteem. If individuals have high self-esteem, then they consider certain facets of their life as important and believe that they can fulfill others' expectations. One does not think of all facets of self-concept at once in all situations. For example, if I am exploring my physical capabilities as in swimming then I am not placing a high emphasis on academic/work or

Numerous factors contribute to the significance of a facet of our self-concept such as the amount of knowledge, education, and experience with a given facet, the level of motivation such as a need for peer approval, and the level of competence within that dimension (Bishop et al., 1997; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Hattie, 1992; Marsh & Hattie, 1996; Marsh et al., 1983; Mortimer & Lorence, 1981; Roid & Fitts, 1989). In 1983, Hitch (as cited in Hattie, 1992) viewed the self as “made up of separate components like the jewels in a crown, each having its own moment of display according to where the light falls” (p. 69).

In today’s fast-changing society, it is important for persons to carry a strong sense of who they are, to feel competent and deserving. The outside world is not stable so it is vital that each person feels stable in his or her sense of self. If one has low self-esteem, he/she is at a disadvantage in dealing with life. Individuals develop how they feel about themselves from internal ideals about themselves and by external messages they receive from the environment and significant others. Positive feeling about ourselves is essential to the self-concept. The self is what is presented to others and colors how we deal with life issues (Bednar et al., 1989; Branden, 1994; Brown, 1993a; Burns, 1979; Dunning, 1993; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Maslach, 1982; Roid & Fitts, 1989; Siebert, 1996; Workman et al., 1986-87).
Individuals' level of self-concept affects their functioning in the work environment, how they deal with others, how high they are likely to advance, how much they are likely to achieve, whom they pick as friends, whom they choose to marry, how they interact with significant others, and the level of personal contentment they achieve. Positive self-concept correlates with flexibility, increased independence, creativity, ability to handle change, and willingness to acknowledge mistakes and modify our behavior. Negative self-concept correlates with inflexibility, increased interdependence, less originality, fear of change, and fear of imperfections of the self (Branden, 1994; Chang, 2000; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Frey & Carlock, 1989; Grayson & Meilman, 1999; Hamachek, 1971; Hoge, 1999; Resnick et al., 1970; Roid & Fitts, 1989; Salmela-Aro & Nurmi, 1997).

Individuals view the entire world through their filter of self which influences all of their thoughts, feelings, and behaviors (Arnstein, 1979; Dunning, 1993; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Frey & Carlock, 1989; Hoffman & Gellen, 1983; Marsh & Richards, 1988; Rosenberg, 1986). A healthy self-concept is important because it can give an individual the feeling of power. If one feels attractive, intelligent, healthy, dynamic, influential, and/or remarkable, then he/she tends to feel a certain amount of personal power. Personal power can assist the individual in better meeting his/her needs in life. This personal power can assist the person in every area in life whether it is in the academic, work, social, relationship, physical/mental health, and/or religious areas. For example, individuals with a healthy self-concept tend to practice better daily health habits, utilize preventive medical services,

The self-concept affects how individuals function in all areas of life. A high level of self-concept allows persons to think well of themselves, think well of others, value relationships with others, and view themselves as part of the universe. They can also view their mistakes as valuable parts of development (Bishop et al., 1997; Blaine & Trivedi, 1998; Fitts, 1972a, 1972b; Fitts & Warren, 1996; Frey & Carlock, 1989; Hansen & Maynard, 1973; Morton, 1984; Salmela-Aro & Nurmi, 1997; Staub, 1980b). Persons with more positive self-concepts tend to have lower levels of hopelessness and depression, less illness and/or faster recovery period from any illness, experience more positive affect, and a higher level of satisfaction with life. Thus, a positive self-concept certainly appears to play a vital role in individuals’ physical and psychological well-being (Abramson, Metalsky, & Alloy, 1989; Bachman et al., 1978; Baumeister, 1993; Clark & Beck, 1999; Fitts, 1972b; Fitts & Warren, 1996; Myers et al., 2000; Prout & Prout, 1996; Roid & Fitts, 1989; Rosenberg, 1985; Walsh & Banaju, 1997; Wylie, 1979).

In relation to attributional studies, the idea of internal versus external attribution has sustained a great deal of attention. Often, when people do not reach their goals they do not place their failure on themselves but place the failure outside of themselves such as with luck or the actions of others. Some individuals, especially those who are depressed, tend to blame themselves for their problems and view their successes as resulting from
experiences outside of themselves (Abramson et al., 1989; Abramson, Seligman, & Teasdale, 1978; Beatty & Hewitt, 1995; Clark & Beck, 1999; Ingram, Miranda, & Segal, 1998; Lent et al., 2000; Roid & Fitts, 1989; Seligman, 1990; Wall & Hayes, 2000). This idea applies to academic arenas from grade school to university settings. There are always some students who evaluate their academic achievement or failure in line with their own behaviors. But, there are always some students who tend to blame their academic achievement or failure on forces outside of themselves. Men tend to place their academic achievement on themselves and place the blame for their failures on others. Women tend to place the cause of their academic achievement on others and place the blame for their failures on themselves (Lewis, 1997; Roid & Fitts, 1989).

Higher education provides the knowledge and ability for persons to function more effectively in adult roles after they graduate. Higher education often provides students with a foundation for enjoying a much more enjoyable and rewarding life outside of their given profession. The benefits of experiencing a more enjoyable and rewarding life may include desiring to continue learning, increasing their level of participation in civic and community activities, increasing their knowledge and enjoyment in the worlds of art, literature, history, and science, expanding their support network, and developing personal values and qualities which lead to a higher level of self-confidence. As individuals continue to evolve and challenge themselves, the desire for continued self-exploration and expansion includes increasing the level of their self-concept (Bowen, 1997; Byrne, 1996a; Chickering & Havighurst, 1981; Douvan, 1981; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Hoge, 1999;
Along with a more positive sense of self, higher education encourages individuals to be more independent, responsible, and critical of their moral/ethical and political choices. Universities also need to consider the overall societal benefits that come with the higher education of persons from all age groups, ethnic origins, religions, marital status, and gender. Individuals who come from different backgrounds have something great to offer society and can reduce the cultural barriers in their community (Arnstein, 1980; Bachman et al., 1978; Bowen, 1997; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Grayson & Meilman, 1999; Hansen & Maynard, 1973; Shapiro, 1997; Vest, 1997; Wong & Whitaker, 1993).

Research studies on self-concept have been conducted for many years. One study examined the effects of assertiveness training on self-concept, locus of control, anxiety, and level of assertiveness (Workman et al., 1986-87). Sixty-four female subjects from a large community college in southern California were assigned to the experimental group (assertiveness training) or the control group (rap group). The following instruments were given: Tennessee Self-Concept Scale, Rathus Assertiveness Scale, Personal Evaluation Scale, Rotter I-E Scale, and State-Trait Anxiety Scale. The researchers used a non-randomized control-group, pretest-posttest design. Pretest comparisons demonstrated no significant differences between the experimental and control group means. Posttest comparisons demonstrated that the experimental group increased significantly in the dependent variables of self-concept, assertiveness, and internal locus of control. There was also a significant reduction in the level of anxiety.
Theories of Depression

Due to the limited scope of this research, the neurobiology/physiology of depression will not be addressed. Also, the genetic, biochemical, and environmental factors that contribute to the occurrence of depression will not be discussed. The following is an overview of the most prevalent theories of depression.

Abraham

The theory and treatment of depression from the psychoanalytic view was dominant well into the 1960s (Brown & Harris, 1978; Clark & Beck, 1999). Although Freud is considered the founder of psychoanalytic theory, Karl Abraham (Abraham & Jones, 1979) wrote the first psychoanalytic theory of depression in which he compared mourning (grief) and melancholia. He described a relationship between mourning and melancholia as related to the loss of an object. The main difference was that melancholia had an element of anger unlike mourning, which was a normal part after a loss of a loved object (other sources which discuss Abraham’s theory can be found in the following: Brown & Harris, 1978; Clark & Beck, 1999; Gaylin, 1968; Mendels, 1970; Zaiden, 1982).

Freud

Sigmund Freud also stressed that both mourning and melancholia are a reaction to losing a loved object (1968). He expanded on Abraham’s theory but placed more emphasis on differentiating mourning from melancholia. Freud connected mourning to the pain related to a loss of an external object. He described melancholia as the angry feeling one turns inward related to a loss of an object. The object does not actually have to be external
but can be, for example, losing an object of love. He stated that melancholia has an additional feature from mourning which is the decrease of self-esteem (other sources which discuss Freud’s theory can be found in the following: Beck et al., 1979; Clark & Beck, 1999; Gaylin, 1968; Jack, 1993; Kutcher et al., 1993; Mendels, 1970; Robbins, 1993; Roberts & Monroe, 1994). Both Abraham and Freud placed emphasis on self-criticism and self-hatred which are so noticeable in depression (Clark & Beck, 1999; Wolman, 1990).

Seligman

Cognitive theories of depression view depressive thoughts and behaviors as secondary to one’s pessimistic expectancies and dysfunctional cognitive style. This dysfunctional cognitive style lends itself to the predisposition of an individual to depression. Two of the most prominent cognitive theories are from Seligman and Beck (please note that Beck was discussed in chapter 1) (Armor & Taylor, 1998; Brandstadler & Renner, 1992; Hirschfeld & Cross, 1987; Maddux & Meier, 1995; Rizley, 1978).

In the 1960s, Seligman, as a graduate student, began exploring the idea of learned helplessness from experiments with dogs in the laboratory. In the 1970s, Seligman originally presented a cognitive theory that depression is related to the state of “learned helplessness” and one’s feeling of not being in control (Peterson & Seligman, 1984; Seligman, 1990). In laboratory experiments, he discovered that when dogs were given a shock from which they could not escape (while they were restrained), they eventually showed a decrease in motivation and learning and eventually stopped trying to escape even
when not restrained. The dogs appeared to give up because they expected that nothing they did would matter. This state of giving up was called learned helplessness. This theory also applied to human beings. When individuals are faced with uncontrollable negative events they "give up" and think that their actions will not change the outcome. Others have found that people apply this belief even to global future events and outcomes and remain passive (Alloy & Abramson, 1982; Clark & Beck, 1999; Corr & Gray, 1996; Peterson, 2000; Petiprin & Johnson, 1991; Rehm, 1990; Sweeney, Anderson, & Bailey, 1986; Zimbardo & Leippe, 1991).

Abramson et al. (1978) redirected the emphasis of the theory to the attributions (cognitions) that one makes to his/her feeling of not being in control, which may result in depression. The actual presence of a negative event was not enough to produce a helpless state (state of depression), but the perception that the event was out of the person's control and the person's explanation were important. If individuals believe that they are responsible for not being able to control the environment and believe that they are inwardly deficient in interacting with the environment and start feeling helpless about future interactions with the environment, then depression, with a lowered self-esteem, may occur (other sources which discuss Abramson et al.'s theory can be found in the following: Bemporad, 1995; Clark & Beck, 1999; Corr & Gray, 1996; Hirschfeld & Cross, 1987; Kao, Nagata, & Peterson, 1997; Kuiper et al., 1983; Lazarus, 1991; Peterson & Seligman, 1984; Peterson et al., 1982; Rush, 1987; Seligman, 1990; Tennen & Herzberger, 1986).

The manner in which an individual thinks or the attributions he/she makes in
regard to life events and stressors may aid in producing depression. If the person feels that
the cause of the event is connected with some deficiency within themselves (internal
vs. external) instead of something within the given situation, then this may produce lower
self-esteem. If the person thinks that the cause of the event is enduring (unstable vs.
stable) instead of fleeting, then this may produce chronic symptoms of depression. If the
person thinks the cause of the event affects many areas of his life (global vs. specific)
instead of just a specific realm, then that person may be prone to depression (Abramson
et al., 1978; Clark & Beck, 1999; Frydenberg, 1997; Higgins, Zumbo, & Hay, 1999;
Hirschfeld & Cross, 1987; Ingram et al., 1998; Pecuch, 1997; Peterson, 2000; Petiprin &
Johnson, 1991; Rehm, 1990; Seligman, 1990; Seligman, Abramson, Semmel, & von
Baeyer, 1979; Sweeney et al., 1986; Wall & Hayes, 2000; Xenikou, Furnham, &
McCatrey, 1997).

Abramson et al. (1989) presented a further revision of this theory called the
hopelessness theory of depression (other sources which discuss Abramson et al.’s theory
can be found in the following: Clark & Beck, 1999; Hollon et al., 1992; Peterson, 2000).
Abramson et al. (1989) suggested that in addition to one’s attributional style, it is
important to observe the inferences about the self in relation to the consequences of the
event (other sources which discuss Abramson et al.’s theory can be found in the following:
Clark & Beck, 1999; Ingram et al., 1998).

**Depression**

Depression is a widely discussed topic in today’s society and literature. In fact,
depression has been affecting mankind throughout all cultures and sections of history. The Greeks used the term "melancholia" to describe depression during the fifth century B.C. (Beck, 1973; Davison & Neale, 1994; Formanek & Gurian, 1987; Ingram et al., 1998; Kaplan & Sadock, 1998; Kovacs & Beck, 1978; Roba, 1988; Robbins, 1993). Famous figures throughout history have experienced depression such as King Saul of the Bible, Job, Napoleon Bonaparte, Abraham Lincoln, Winston Churchill, Ernest Hemingway, Chopin, Handel, Vincent van Gogh, Sigmund Freud, Monica Seles, Ted Turner, Mike Wallace, Tipper Gore, and Princess Diana of Wales (Bacon, 1993; Kaplan & Sadock, 1998; Kovacs & Beck, 1978; National DMDA, 1999, 2000; Papolos & Papolos, 1997; Robbins, 1993).

Depression is a universal experience and has been called "the common cold of mental health" or "the world's number one public health problem." It does not exclude any group of people because it invades every geographical boundary, ethnic and cultural group, age group, income status, social class, and occupational and/or educational level (Barnes, 1993; Bosse et al., 1975; Burns, 1980; Chang & Strunk, 1999; Clark & Beck, 1999; Gotlib et al., 1990; Ingram et al., 1998, Karp, 1996; Lewinsohn, Munoz, Youngren, & Zeiss, 1986; McLean, 1982; Meyer & Deitsch, 1996; Munoz & Ying, 1993; National DMDA, 1999, 2000; NIMH, 1995, 1997, 1999; Papolos & Papolos, 1997; Robbins, 1993; Secunda, Katz, Freedman, & Schuyler, 1973; Swallow & Segal, 1995).

The National Institute of Mental Health (NIMH, 1999) cited a recent study by the World Health Organization (WHO) and the World Bank that found that major depression (unipolar), in the United States and worldwide, is the leading cause of disability. In fact,
depression afflicts approximately 100 million people worldwide each year. If a person is
depressed, this does not mean that he/she is crazy, abnormal, weak, and/or flawed in
character. A person who is depressed cannot simply will, wish, and/or work harder to make
the depression go away. Since depression is a common reaction to the ups and downs of
life, not a rare condition, there are numerous people who need assistance in dealing with
depression (Abrahamson, Hornyak, & Rehm, 1998; Allen, 1990; Clark & Beck, 1999;
Frydenberg, 1997; Grayson & Meilman, 1999; Lewinsohn et al., 1986; National DMDA,

Approximately $30-44 billion is lost each year in the United States from the effects
of depression in the following areas: social, economic, and personal (Clark & Beck, 1999;
Papolos, 1997; Schmitt, 1999; Vredenburg, Krames, & Flett, 1985; Williams, 1995).

Ingram et al. (1998) and the National DMDA (1999, 2000) state some facts about the costs
of depressive illnesses (affective disorders): Total costs equal $43 billion a year: $12.4
billion (27%) in direct treatment, for example, inpatient, outpatient and medication
treatment; $7.5 billion (17%) in deaths associated with suicide, for example, loss of
lifetime earnings; $11.7 billion (28%) in absenteeism, and $12.1 billion (28%) in lost
productivity.

In the United States each year, more than 23 million adults will be diagnosed,
according to specific DSM-IV-TR criteria, with a depressive disorder—approximately 1 out
reports that depression, although it can occur at any age, often develops between the age
range of 25-44. However, the problem of depressive disorders is not found just in adults. Depressive disorders are rising among young adults, with 20% of major depression cases being diagnosed before the age of 25 years. The peak for major depression ranges between 15 to 19 years of age in females and ranges between 21 to 25 years of age in males (Astin, 1993; Bertoia, 1992; Cappeliez & Flynn, 1993; Clark & Beck, 1999; Dean & Ensel, 1983; Feaster, 1996; Felix, 2000; Ingram et al., 1998; Kutcher et al., 1993; McGuire, 1998; Munoz et al., 1994; Offer & Spiro, 1987; Regier et al., 1988; Roba, 1988; Robbins, 1993; Steer et al., 1999; Tousignant & Hanigan, 1993; Walter, 1989). According to the National Institute of Mental Health (1999), approximately 2.5% of children and 8.3% of adolescents in the United States experience depression. The U.S. Department of Health and Human Services (cited in National DMDA, 2000) reports that approximately 1 in 33 children and 1 in 8 adolescents experience depression.

Research has indicated that the onset of depression is beginning earlier in persons born in the more recent decades. According to Meyer and Deitsch (1996), 1% of Americans born before 1905 experienced major depression by age 75 and 6% of Americans born after 1955 experienced major depression by age 30. If depression begins earlier in life, it tends to be more persistent with numerous recurrences and continues into the adult years. Individuals who have one episode of major depression have a 50% chance of recurrence. Persons who have two episodes of major depression have a 70% risk of recurrence, and those who have three or more episodes have a 90% risk of recurrence (American Psychiatric Association, 1994; Angst & Merikangas, 1997; Beck, 1967, 1973; Cappeliez & Flynn, 1993; Clark & Beck, 1999; Ernst, Schmid, & Angst, 1992; Felix, 2000;
Research studies have found that women tend to experience depression more frequently, approximately twice as much as males (Beeber, 1999; Brown & Harris, 1978; Clark & Beck, 1999; Culbertson, 1997; Flynn & Cappeliez, 1993; Formanek & Gurian, 1987; Horwath et al., 1992; Ingram et al., 1998; Jack, 1993; Kelly, Kelly, Brown, & Kelly, 1999; Lewinsohn et al., 1984; Munoz & Ying, 1993; National DMDA, 1999, 2000; NIMH, 2000; Regier et al., 1988; Robbins, 1993; Stoppard, 1993; Williams, 1995). Prevalence rates for males and females have varied in the literature with as high as 20-21% for females and 12-13% for males (Clark & Beck, 1999; Ingram et al., 1998). Kaplan and Sadock (1998) reported the lifetime prevalence rate for major depressive disorder is 10-25% for women and 5-12% for men. The National DMDA (2000) reported that the lifetime prevalence rate for major depression is 24% for women and 15% for men.

Interestingly enough, often in college students, male and female students do not differ on the rating of depression. This finding may be due to the idea that college students are made of a more similar sample in terms of roles, values, and expectations for male and female students (Alfeld-Liro & Sigelman, 1998; Baron & Perron, 1986; Daughtry & Kunkel, 1993; Felix, 2000; Lopez-Culver, 1991; McLennan, 1992; Oliver & Burkham, 1979; O'Neil & Marziali, 1976; Robbins, 1993; Shirley, 1990; Steer & Clark, 1997; Wiseman & Gutfreund, 1995). College students tend to experience clinical depression and dysthymia twice as often as working individuals of similar ages and background.
environments (Bertoia, 1992; Buckman, 1988; Bumberry, Oliver, & McClure, 1978; Dixon, 2000; Dixon & Reid, 2000; Feaster, 1996; Felix, 2000; Roba, 1988; Shirley, 1990; Strauss, 1998).

Depression takes its toll on individuals and society as a whole. It affects not only the person living with depression but with the family and friends (Clark & Beck, 1999; NIMH, 2000; Shirley, 1990; Swallow & Segal, 1995). The effects of depression are widespread and can be associated with the following problem areas: relationships with others and community, divorce, parenting, academic performance difficulties and attrition, health difficulties, absenteeism at work, work performance difficulties, lower feelings of self-worth, and impaired ability to handle stress and typical everyday problems. Persons may also experience a reduction in their level of educational attainment and annual income (Affsprung, 1998; Clarke et al., 1990; Dixon & Reid, 2000; Dunner, 1997; Flynn & Cappeliez, 1993; Haines et al., 1996; Ingram et al., 1998; Kendell et al., 1987; Kutcher et al., 1993; Lewinsohn et al., 1984; Lewinsohn et al., 1986; Munoz & Ying, 1993; Newman & Beck, 1990; Wilson & Krane, 1980).

Even more common, individuals may have a milder form of a depressive disorder which does not involve enough symptoms to meet specific DSM-IV-TR criteria (American Psychiatric Association, 2000). However, even these few depressive symptoms may affect their ability to function in the above-mentioned problem areas (Clark & Beck, 1999; Grayson & Meilman, 1999; Haines et al., 1996; Hammen, 1995; Munoz, 1993; Munoz et al., 1994; Oliver & Burkham, 1979; Roberts & Monroe, 1994; Rush & Giles, 1982). According to Lightsey and Christopher (1997), approximately 18% of the population, at
any given time, is experiencing mild depressive symptoms.

If left untreated, these mild symptoms may persistently recur and eventually build a lifelong pattern of depression, decreased social and physical functioning, and increased suicide attempts (Angst & Merikangas, 1997; Clark & Beck, 1999; Dunner, 1997; Maier et al., 1997; Munoz & Ying, 1993; Strauss, 1998). It is imperative that children and adolescents who are experiencing depression be accurately diagnosed and treated to prevent problems in social, academic, emotional, and behavioral areas (Astin, 1993; Beck et al., 1990; Cappeliez & Flynn, 1993; Chan, 1995; Clark & Beck, 1999; Clarke, Lewinsohn, & Hops, 1990; Dunner, 1997; Hammen, 1995; Kutcher et al., 1993; Lopez, 1986; NIMH, 1999; Nolen-Hoeksema & Girgus, 1994).

The health risks associated with depression are astounding. Depression often occurs with a variety of other physical disorders such as heart disease, diabetes, stroke, hypertension, lowered immune system, gastrointestinal problems, and cancer. In fact, approximately 50% of people with depression have heart disease, approximately 25% of people with depression have cancer, and 10-27% of people with depression have experienced a stroke. Depression can also increase the potential for other physical illnesses, disability, and premature death (Chang & Strunk, 1999; Curtis, 1990; Johnson, 2001; Munoz & Ying, 1993; NIMH, 1995, 1997, 1999, 2000; Salovey, Rothman, Detweiler, & Steward, 2000; Taylor et al., 2000).

For example, a recent NIMH-supported study (1999) reported that persons who have experienced major depression, as compared to persons without a history of major depression, were more than four times as likely to have a heart attack within a 12-13-year
follow-up period. When compared to individuals without a history of mild depression, individuals who have a history of mild depression for 2 or more weeks were more than twice as likely to have a heart attack. It is important to note that associations were found between some psychotropic medications and the risk of heart attacks. The NIMH study found that the above-mentioned associations were merely a reflection of the primary relationship between the experiences of depression and heart trouble (Munoz & Ying, 1993; NIMH, 1997, 2000).

In addition to associated health problems, another reason to examine the prevention, occurrence, and treatment of depression is the factor of suicide, which ranks eighth as the cause of death in the United States. Schmitt (1999) reported that approximately 31,000 Americans commit suicide every year and approximately 500,000 need emergency room attention after a suicide attempt. According to the NIMH (1997) and the National DMHA (1999, 2000), approximately 15% of those hospitalized for depression and 15% of those who receive no treatment for severe depression someday commit suicide. Suicidal ideation has to be taken very seriously with appropriate intervention provided due to its potential lethality (American Psychiatric Association, 1994; DeAngelis, 2001; Frydenberg, 1997; Mcintosh, 2000; NIH, 2000a; Robbins, 1993; Westefeld, Cardin, & Deaton, 1992; Williams, 1995).

The presence of depression and feelings of hopelessness and isolation increase the risk of life-threatening behavior such as suicide gestures and attempts (Barnes, 1993; Clark & Beck, 1999; Enelow, 1970; Frydenberg, 1997; Ingram et al., 1998; Lewinsohn et al., 1984; Munoz & Ying, 1993; Robbins, 1993; Rogers, 2001; Williams, Friedman,
Secunda, 1970). Also, having any kind of psychiatric illness increases the risk for suicide, with 90% of individuals who commit suicide having a psychiatric illness at the time of their death. Of that 90%, 80% of individuals who commit suicide have a depressive disorder (Clark & Beck, 1999; Gotlib et al., 1990).

It appears that suicidal ideation occurs at approximately the same rate for males and females who are experiencing major depression. Regarding suicidal attempts, women attempt suicide more often than men, but men tend to be more successful in completing their suicide attempt. In fact, men commit suicide at a rate of four times that of women (Clarke et al., 1990; DeAngelis, 2001; McIntosh, 2000; NIMH, 2000). When depression occurs in children and adolescents, there is an increased risk of suicide. Suicide has increased dramatically in young adults over the last few years (Hayes, 1997; Hayes, 2000; Mendels, 1970; Meyer, 2000; NIH, 2000b; Rice & Meyer, 1994; Rush, 1982; Tousignant & Hanigan, 1993). Rudd (1989) stated that from 1960 to 1980 the suicide rate among 15-24-year-olds almost tripled. In 1996-2000, in the age range of 15-24, suicide was the third leading cause of death (Allen, 1990; DeAngelis, 2001; Frydenberg, 1997; Hayes, 2000; McIntosh, 2000; NIMH, 1999; Schmitt, 1999).

In fact, some researchers have noted that suicide is approximately twice as high in students when compared with non-students of the same age (Bertoia, 1992; Buckman, 1988; Cappeliez & Flynn, 1993; Felix, 2000; Grayson & Meilman, 1999; Halgin & Leahy, 1989; Lopez, 1986; McLennan, 1992; Roba, 1988; Shirley, 1990; Strauss, 1998). A greater level of perfectionistic tendencies, often found in college students, may lend itself to more negative psychological symptoms and greater suicidal ideation. In fact, it has been reported...
that suicide was the second leading cause of death on university campuses (Chang, 2000; Chang & Rand, 2000; Dean & Range, 1996; Jobes, Jacoby, Cimbolic, & Hustead, 1997; Rice et al., 1998; Vrendenburg, Flett, & Krames, 1993).

Due to the limited scope of this research and the confidentiality criteria established by AU’s Human Subjects Review Board (HSRB) and WMU’s Human Subjects Institutional Review Board (HSIRB), as discussed in the Data Collection section in Chapter 3, the presence or absence of subjects’ suicidal ideation was not further explored. In this research study, I chose to tell each class in my introduction that I did not anticipate anything happening but, for example, if answering any of the questions brought up thoughts and feelings and/or issues for them, then I recommended that they contact the counseling center to talk with someone.

Although there are numerous instruments used to identity depression, the BDI has been utilized in a wide range of research studies. Factor analytic studies of the BDI often yield a small number of factors that concisely summarize the 21 test items. For example, 303 undergraduate students from a large southwestern university (125 male, 178 female) completed a packet of mood questionnaires that included the BDI. Principle-axis factor analysis on the students’ responses yielded a 2-factor solution which accounted for 33% of the variance in BDI scores: Negative Self-attitude dimension and Performance Impairment dimension. These findings were consistent with previous studies that evaluated the BDI’s factor structure (Killgore, 1999).

Miranda and Munoz (1994) examined the effectiveness of early intervention for minor depressive symptoms in primary care patients. The subjects were 150 medical
patients randomly assigned to a control condition or an 8-week cognitive-behavioral course. The symptoms of depression were measured by the BDI. The results supported the effectiveness of early intervention, with subjects demonstrating a reduction in depressive symptomatology through a 1-year follow-up program.

**Self-Concept and Depression**

Throughout the years, the descriptions of depression have maintained some consistency. Although some writers have disagreed on some of the descriptions in the past, general agreement exists about many of the characteristics of depression. The main characteristics of depression that have been universally accepted are, for example, low mood, pessimism, and self-criticism (Abramson et al., 1978; Bailey, 1997; Beck, 1967, 1973; Blatt & Bers, 1993; Fitts, 1965; Harter, 1986; Kendell et al., 1987; Kernis, 1993; Lazarus, 1991; NIH, 2000a, 2000b; NIMH, 2000; Prout & Prout, 1996).

Self-criticism is a characteristic that relates to low self-esteem and thereby to low self-concept. Much has been written about the relationship between depression and self-concept, both of which are complex subjects. Depression and self-concept are intertwined and interrelated. Individuals' self-concept is key to the experience of depression, and depression always involves a component of the self. During times of depression, most individuals begin to set unrealistic standards, make self-belittling remarks, or make harsh judgments about themselves. Often these events lead them to see themselves as basically worthless and inadequate. Consequently, the self-concept is torn down during these times of depression (Abramson et al., 1978; Bailey, 1997; Beck, 1967.

Loss, or the feeling of loss, which is so often associated with depression, may be an actual loss or the loss of self-esteem which reflects on the total self-concept. The loss, which leads to a decrease in self-esteem, may be connected to a specific event, a long-term upsetting life circumstance, or by an internal thought process. The loss of self-esteem may be connected to one’s being unable to achieve a set goal (Blaine & Crocker, 1993; Brown et al., 1990a; Burns, 1989; Cantor, 1990; Gold, 1990; Mead, 1970; Robbins, 1993; Schwab, 1970; Whybrow, 1996).

Cognitive functions that have been related to depression are low self-esteem, negative self-concept, self-disparaging thoughts, irrational beliefs, and negative attributions (Beck, 1967, 1973; Birtchnell, 1996; Brown & Harris, 1978; Clarke et al.,
1990; Copeland, 1996; Curtis, 1990; Fitts, 1965; Frydenberg, 1997; Hallett, 1998; Mortimer & Lorence, 1981; Rehm, 1987; Robbins, 1993; Rosenberg, 1986; Rosenberg & Kaplan, 1982; Segal & Mural, 1993; Verkuyten, 1995). Each time a person reinforces the negative evaluation of behavior or thoughts, then the feelings of self-worth are lowered and lead to more feelings of sadness and feelings of worthlessness (Beck, 1976; Burns, 1980; Clark & Beck, 1999; Hokanson, Rubert, Welker, Hollander, & Hedeen, 1989; Treadgold, 1999). And, according to Beck (1967, 1973) these cognitive functions tie into one’s concept of the negative cognitive triad. Persons with depression tend to experience distorted thoughts toward themselves, their world, and their future, which tends to devalue their self-concept (these ideas have been further supported by the following: Blatt, 1995; Dixon & Reid, 2000; Freeman, 1993; Grayson & Meilman, 1999; Kernis, Grannemann, & Mathis, 1991; Kernis et al., 1998; Pelham, 1993; Rush & Giles, 1982; Shirk & Renouf, 1992; Smits & Oliver, 1982; Tennen & Affleck, 1993; Williams, 1984).

As persons develop, they come to view themselves, their attitudes, goals, attributes, and values in a certain way, called concepts or schemas. Schemas evolve from their own personal experiences, from interactions with their environment, from others’ opinions of them, and from identifications with key figures such as parents. Therefore, schemas are building blocks for the self-concept. The self-concept is a mixture of one’s schemas within different areas or domains, for example, school, work, family, and social. Individuals view themselves, the world, and the future through the lens of their personal concept which may tend to be positive or negative. If their self-concept is positive, they may then see themselves as intelligent, capable, attractive, and lovable. If their self-concept is negative,
they may then see themselves as inferior, unattractive, and unlovable. When individuals
are depressed, their negative self-concept surfaces with great strength and power (Beck et
al., 1990; Blatt & Bers, 1993; Campbell & Lavellee, 1993; Clark & Beck, 1999; Curtis,
1990; Freeman, 1993; Hattie, 1992; Mueller, Johnson, Dandoy, & Keller, 1992; Oliver &
McGee, 1982; Rosenberg, 1985; Rosenberg & Kaplan, 1982; Schmidt et al., 1995; Shirk &
Renouf, 1992; Treadgold, 1999).

Persons' self-concept is built on past experiences on which ideals are formed.
These ideals are what they use to measure their level of achievement. Self-concept has a
main function of determining if they have met their ideals that they established for
themselves (Beatty & Hewitt, 1995; Freeman, 1993; Morse & Gergen, 1982; Oyserman &
Markus, 1993; Whybrow, 1996). A poor self-concept can magnify small mistakes or
imperfections into overwhelming images of personal failure. One's self-concept
contributes to the decisions in life. Low self-concept can demonstrate itself, for example,
in the choice of a marriage partner which leads to an unhappy marriage, a career which
leaves dreams and goals unfulfilled, chronic depression, and destructive life habits.
Positive self-concept does not guarantee that one will not have troubles in life, but it
enables the person to be more resilient in coping with changes and problems in life
(Alfeld-Liro & Sigelman, 1998; Blaine & Crocker, 1993; Branden, 1994; Conway &
Hoge, 1999; Roid & Fitts, 1989).

Studies have been conducted on psychiatric patients and the relationship between
depression and self-concept. In the 1960s, Beck and Stein utilized the Beck Depression
inventory (BDI) and a self-concept test they developed which consisted of certain characteristics and traits such as appearance, intelligence, and selfishness. They had the patients rate themselves on a 5-point scale and how they felt about these characteristics. Beck and Stein found a significant inverse relationship ($r = -0.66$) between depression and self-concept. They concluded that depressed patients, as compared to nondepressed patients, exhibited low self-concept and held a negative view of themselves (Beck, 1967; Rush & Giles, 1982). Another study in 1964 by Laxer (as cited in Rush & Giles, 1982) also found that depressed psychiatric inpatients had lower self-concept than “other” types of psychiatric inpatients at the time of admission. But at the time of discharge, their level of self-concept was increased, which was presumed to be connected to their decreased level of depression (Beck, 1967).

**Undergraduate and Graduate Students**

College is a time of transition, so it is natural that one's self-concept tends to also be in a period of re-examination (Arnstein, 1989; Berzonsky & Kuk, 2000; Burns, 1979; Gergen, 1982; Grayson, 1989; Hudson, 1991; Jackson & Bosma, 1990; Kroger, 1989; Madison, 1969; Mortimer & Lorence, 1981; NIH, 2000a; Olbrich, 1990; Regeth, 1997; Sprinthall et al., 1986; van der Werff, 1990; Whiteley, 1982). Transitions in life are turning points that all individuals experience. They can be generated by internal states and/or external events. These times of transition can be times for growth in the way persons perceive themselves, their surrounding environment, and the way they interact with that environment. Growth may certainly contribute to an increasing level of self-concept.
Choosing a career and academic success in preparing for that career are very important components of the developmental task for individuals in their late adolescence and young adulthood. Often, students entertain a possible career path in light of how they view their abilities or the level of their self-concept. It is also important during this period that the self-concept be examined, expanded, and solidified. If individuals strive for intimacy with others before the level of their self-concept is increased, then the self may be overwhelmed and/or lost (Arnstein, 1980; Bee, 1987; Blustein & Palladino, 1991; Byrne, 1996a; Chickering & Havighurst, 1981; Douvan, 1981; Dyk & Adams, 1987; Gaff & Gaff, 1981; Gecas & Mortimer, 1987; Hansen & Maynard, 1973; Kaplan & Sadock, 1998; Katz, 1975; Lucas, 1997; Marsh et al., 1997; NIH, 2000b; Regeth, 1997; Salmela-Aro & Nurmi, 1997; Seffge-Krenke, 1990; Stevens-Long & Commons, 1992; Trusty, Robinson, Plata, & Ng, 2000; Whiteley, 1982).

Undergraduate students tend to be experiencing separation from family, friends, and other means of support while trying to adapt to a new environment, values, and activities. They are at a stage of transition which lends itself to exploring new values, behaviors, and relationships. Often undergraduate students are heavily influenced in their career choice by the expectations of their family (Arnstein, 1980; Blocher & Rapoza, 1981; Douvan, 1981; Felix, 2000; Forrest, 1997; Frydenberg, 1997; Grayson & Meilman, 1981).
Graduate students tend to be more self-directed in their learning and study skills. Often, their attendance in graduate school comes out of their own level of motivation and their strong sense of self. Graduate students have often explored the existential questions surrounding the meaning and purpose in life and have the desire to continue to explore those questions. Therefore, they may tend to have a higher level of self-concept and a lower level of depressive symptoms (Anderson & Hayes, 1996; Arnstein, 1980, 1984a; Bachman et al., 1978; Beck et al., 1988; Chickering & Havighurst, 1981; Hamachek, 1971; Hoge, 1999; Kaplan & Sadock, 1998; Kreger, 1995; Marsh, 1989, 1993; Oliver & Burkham, 1979; Pappas & Loring, 1985; Shavelson & Bolus, 1982; Shirley, 1990; Steer et al., 1999; Wong & Whitaker, 1993).

The number of young adults who enter university settings in the year after high school is approximately 60-75%. Half of these individuals obtain some type of degree within 5 years, and approximately 25% obtain a bachelor's degree or higher. But, over the next 4 years, approximately 32% of individuals ages 25-29 have actually completed 4 or more years of college. Of these individuals who do complete college, approximately 33% will enter graduate school the following year (Arnett, 2000; Gerdes & Mallinckrodt, 1994; Gladieux & Swail, 2000).

Overall, U.S. universities tend to annually award approximately 387,000 master's
degrees and 41,000 doctoral degrees. It is estimated that up to 50%, with as high as 65%, of entering graduate students do not complete their Ph.D. degree. Some attrition from graduate programs is anticipated, but the loss of so many denotes a genuine loss to the university and the community (Gumport, 1999; National Research Council, 1996).

It has been estimated that 30-60% of first-year college students leave school and as high as 50% during the total undergraduate years. Minority students, especially African Americans, Spanish Americans, and Native Americans, have a higher attrition rate than Caucasians or Asians. Sometimes students drop out of college, after borrowing to finance their education, and may be in a worse situation than before they started. For example, they may leave college without a degree and a large amount of debt to repay (Bray, Braxton, & Sullivan, 1999; Forrest, 1997; Gerdes & Mallinckrodt, 1994; Gladieux & Swail, 2000; Griffin, 1992; Hines, 1998; Lopez, 1986; Martin, 1996; Melendez, 1997; Neisler, 1992; Offer & Spiro, 1987; Papalia & Olds, 1992; Watkins, 1981; Witherspoon, Long, & Chubick, 1999).

The key to student retention is what the university can offer to facilitate the growth and success of its students. When students learn about different areas, they expand their sense of self, find their talents, and broaden their goals for the future. Faculty and administrative personnel can take an interest in students and aid in decreasing the attrition rates. Also, the university counseling center can be of great assistance to students. The counseling center might use anticipatory intervention programs which might include an evaluative screening process of the incoming students for levels of self-concept and depression, workshops, and/or seminars on various topics. The psychologists can help
them explore their intrapersonal issues, interpersonal conflicts, time-management skills, social skills, relaxation skills, assertiveness skills, stress management skills, career interests, study skills, and decision-making skills. Students can take some time to examine these issues and decrease their level of depression and increase their level of self-concept (Anderson, 1985; Arnstein, 1980; Astin, 1993; Bachman et al., 1978; Blinne & Johnston, 1998; Blocher & Rapoza, 1981; Curtis, 1990; Gordon, 1985; Hermon & Hazler, 1999; Lewinsohn et al., 1984; Mendels, 1970; Miller & Jones, 1981; Noel, 1985; O'Connor, 2001; Shapiro, 1997; Silvernail, 1985; Stodt, 1987; Toy, 1985; Williams, 1995; Wilson et al., 1997).

Student retention tends to be better for all involved—the student and the university. Obtaining a college degree tends to be the standard just like obtaining a high-school diploma was in the previous century. College attendance opens the door for individuals to have a chance at the best jobs and the best chances in life. Today's job market often puts a premium on education beyond high-school—always looking for credentials (Gardner, 1992; Gladieux & Swail, 2000; Hines, 1998; Kiah, 1992; Martin, 1996; Melendez, 1997).

According to Kaplan and Sadock (1998), 30% of college graduates decide to obtain some type of graduate education. It is more cost effective for the university to keep the students than enrolling new or transfer students. Student retention is aided by faculty and student interactions, student participation in campus activities, and interaction with peers. It appears that there is a relationship between student involvement and student achievement which helps to retain the students. There are numerous variables that play
into the rate of attrition or retention such as grades, developing a positive sense of self, level of depression, increasing participation in decisions, making and maintaining supportive relationships, and an increasing sense of belonging within the university environment and community. Other identified areas that contribute in student retention are orientation to the new campus, supportive academic advisors, mentors, supportive peer relationships, proper disbursement of financial aid, developmental courses offered in the class schedule, and the availability of career counseling (Anderson & Hayes, 1996; Astin, 1993; Beck et al., 1990; Beeber, 1999; Dunphy, Miller, Woodruff, & Nelson, 1987; Gerdes & Mallinckrodt, 1994; Gladieux & Swail, 2000; Martin, 1996; Mendels, 1970; Miller & Jones, 1981; Neisler, 1992; O’Neil & Marziali, 1976; Papalia & Olds, 1992).

Students often leave college by their own decision. Approximately, 85% of student withdrawals are voluntary. Students may leave because they are not navigating the transition period very well and feel isolated. These feelings of isolation and loneliness can contribute to a decrease in self-concept and an increase in depressive symptoms. Depression, especially mild depression, is common in college students. If they have a low self-concept or feelings of depression, then they may have trouble being in a new environment, concentrating on school, making personal and career choices, making new friends, and making commitments to lifetime goals. These areas of difficulty may have a long-term impact on individuals. It is vital that the symptoms of mild depression be acknowledged and addressed before they become more persistent and develop into a pattern of major depression (Affsprung, 1998; Anderson, 1985; Angst & Merikangas, 1997; Bachman et al., 1978; Beeber, 1999; Birnie-Lefcovitch, 1996; Bosse et al., 1975;
Depression is often reported to be the leading emotional or psychiatric disorder found on university campuses. Depression tends to be associated with decreased learning and academic performance, increased attrition rates, increased drug and alcohol usage, increased suicide rate, impaired social skills, impaired parenting skills—even if the depressive symptoms are mild or moderate (Bertoia, 1992; Buckman, 1988; Feaster, 1996; Felix, 2000; Foxhall, 2001; Golin & Hartz, 1979; Lopez-Culver, 1991; NIH, 2001a; Roba, 1988; Shirley, 1990; Strauss, 1998). Overall, approximately 25-35% of individuals with depression get "good care." Universities can take an important step in recognizing depressive symptoms and offering excellent care for their students in the university counseling center. One study even suggested that students who receive counseling are 14% more likely to remain in college as compared to those students who do not receive counseling (Rundle, 2000; Wilson et al., 1997).

The university environment is very important in the development of the self-concept. The social aspect of peer relationships in school can be a feedback source for the developing sense of self. Those students who develop a positive self-concept in academic

Summary

In summary, the review of the literature highlights the importance of self-concept in relation to how individuals live their lives. Throughout the different stages in life, individuals examine the question “Who am I?” Changes in their lives, such as moving away from home, starting college or graduate school, exploring new values, and/or making new friends can trigger a period of re-examination of the self. Individuals view the entire world through their filter of self which influences all of their thoughts, feelings, and behaviors. Persons with more positive self-concepts tend to have lower levels of hopelessness and depression, less illness and/or faster recovery period from any illness, and a higher level of satisfaction with life. Thus, a positive self-concept certainly appears to play a vital role in individuals’ physical and psychological well-being (Chang, 2000;

Depression is occurring earlier and earlier in today's society. It was once generally accepted that depression started between the ages of 30-40 but research has now documented that mild depressive symptoms often begin in late adolescence/young adulthood. Depression takes a toll on individuals and society with widespread effects in areas such as relationships with others, physical health, academic performance, work performance, feelings of self-worth, and the ability to handle stress (Dunner, 1997; Flynn & Cappeliez, 1993; Swallow & Segal, 1995).

Depression and self-concept are intertwined and interrelated. Individuals' self-concept is key to the experience of depression, and depression always involves a component of the self. During times of depression, most individuals begin to set unrealistic standards, make self-belittling remarks, or make harsh judgments about themselves. Often these events lead them to see themselves as basically worthless and inadequate. Consequently, the self-concept is torn down during these times of depression (Beck, 1967, 1972, 1973; Fitts, 1965; NIH, 2000a, 2000b; NIMH, 2000; Roid & Fitts, 1989).

Depression, especially mild depression, is common in college students and is often reported to be the leading emotional or psychiatric disorder found on university campuses. Late adolescence/young adulthood is just the time when numerous changes are occurring and when the effects of lowered self-concept and depression can have a great impact on their future. If they have a low self-concept or feelings of depression, then they may have trouble being in a new environment, concentrating on school, making personal and career...
choices, making new friends, and making commitments to lifetime goals. These areas of
difficulty may have a long-term impact on individuals. It is vital that the symptoms of mild
depression be acknowledged and addressed before they become more persistent and
develop into a likely pattern of major depression (American Psychiatric Association, 2000;
DMDA, 2000; NIH, 2000a, 2000b).

Universities can take an important step in recognizing depressive symptoms and
offering excellent care for their students in the university counseling center. Psychologists
can fill an important role for students by offering workshops and seminars for students on
a range of topics such as personal, social, and academic issues, self-concept, and
depression. Students armed with these factors can more confidently enter society and be
more productive and satisfied in their lives (Gladieux & Swail, 2000; Hermon & Hazler,
1999; O’Connor, 2001; Rundle, 2000).
CHAPTER III

METHODOLOGY

Introduction

This chapter describes the quantitative research design used for an ex post facto study of the differences between undergraduate and graduate students with respect to their level of self-concept and level of depression.

Population and Sample

The population for this study consists of undergraduate and graduate students from Andrews University (AU) and Western Michigan University (WMU). The sample was a convenience sample which was obtained by asking various professors from different departments permission to administer the research packet (the Demographic Questionnaire, the Tennessee Self-Concept Scale: Second Edition [TSCS:2], and Beck Depression Inventory-II [BDI-II]) to the students in each of their classes.

Variables

The Independent variables in this study are program level and, for some hypotheses, depression group or self-concept subscale scores. The Dependent variables in this study are self-concept subscale scores and, for some hypotheses,
depression raw scores or depression group.

**Instrumentation**

Data collection was accomplished by the use of three instruments: (1) the Demographic Questionnaire, (2) the Tennessee Self-Concept Scale (TSCS:2), and (3) the Beck Depression Inventory-II (BDI-II). Descriptions of each instrument are provided below.

**Demographic Questionnaire**

The Demographic Questionnaire, which I constructed, requests information concerning gender, age group, marital status, ethnic origin, current program level, GPA, and religion (Appendix C). Instructions asked the participants to check the appropriate box in response to each question. The Demographic Questionnaire requires less than 1 minute to complete.

**Tennessee Self Concept Scale: Second Edition**

The Tennessee Self-Concept Scale (TSCS) was originally developed by William Fitts in 1965 but this research utilized the Tennessee Self-Concept Scale: Second Edition (TSCS:2) as developed by Fitts and Warren in 1996. This edition was updated and redesigned to give clinicians and researchers a self-concept test that was easier to use while still keeping the basic characteristics that have been associated with the Tennessee Self Concept Scale (TSCS) over the years. For example, the TSCS:2 retained the two frames of reference (facets): the Internal frame of reference (Identity, Satisfaction,
Behavior), and the External frame of reference (Physical, Moral-Ethical, Personal, Family, Social). The TSCS:2 was shortened from 100 questions to 82 questions but is psychometrically equivalent to the 1988 revised edition (median correlation = .94 of the scale scores in both editions). So, one can use the TSCS:2 while still drawing from the voluminous existing literature utilizing the TSCS (Fitts & Warren, 1996).

Most of the original items of the TSCS were preserved but an important item, the Academic/Work Self-Concept scale, was added to the external frame of reference of the TSCS:2. The Academic/Work Self-Concept scale, according to Fitts and Warren (1996), measures how “people perceive themselves in school and work settings, and of how they believe they are seen by others in those settings” (p. 24). The TSCS:2 was restandardized using a sample from across the United States which consisted of over 3,000 subjects who ranged in age from 7 to 90 years of age (1,944 adults). The sample included a broad spectrum of subjects such as public high-school students, college students, members of church groups, members of community groups, and public school staff members. The TSCS:2 has two forms—the Adult Form with 82 items and the Child Form with 76 items (Fitts & Warren, 1996).

TSCS:2’s reliability was estimated by two types: internal consistency (Cronbach’s alpha) and test-retest reliability. The internal consistency estimates for the TSCS:2 Adult Form range from .73 to .95. The test-retest reliability estimates, with the test-retest period of 1-2 weeks, for the TSCS:2 Adult Form range from .47 (Inconsistent Responding score) to .82 (Total Self-Concept score). The content validity of the TSCS:2 is built on the method used in the original TSCS. For the new Academic/Work Self-Concept scale, the
items were reviewed by four psychologists who agreed upon the items (Fitts & Warren, 1996).

The concurrent validity studies compare the TSCS to other measures that were thought to be related to the general self-concept. In 1979, Van Tuinen and Ramanaiah demonstrated a correlation of .75 between the TSCS Total Scores and the Coopersmith Self-Esteem Inventory. In 1988, Marsh and Richards examined the TSCS scores and the scores on the Self-Description Questionnaire III and found a correlation of .71 for the Total scores on each instrument. Yonker, Blixt, and Dinero (1974) and Shavelson and Bolus (1982) (as cited in Fitts & Warren, 1996; Roid & Fitts, 1989) studied the Piers-Harris Children's Self-Concept Scale (PHSCS) and the TSCS Total Score and obtained correlations ranging between .51 to .80.

The Adult Form, which was used in this study, contains self-descriptive statements which the subject uses to paint a picture of himself or herself while using five response categories: (1) "Always False"; (2) "Mostly False"; (3) "Partly False and Partly True"; (4) "Mostly True"; and (5) "Always True." This form can be given individually or in groups and completed in 10 to 20 minutes. The Adult Form can be completed by individuals with a third-grade reading level or higher, ages 13 and older. There are two different forms for scoring the Adult Form: hand scoring and computerized scoring and interpretation. The hand scoring or AutoScore™ (Fitts & Warren, 1996, p. 5) form was used in this study. The Adult Form, with the Profile Sheet detached, is given to each participant and the instructions are read aloud.

The TSCS:2 Adult Form consists of 82 items designed to measure self-concept on
numerous dimensions. It has several categories: (1) Validity scores: Inconsistent Responding, Self-Criticism, Faking Good, and Response Distribution; (2) Summary scores: Total Self-Concept and Conflict; (3) Self-Concept scales: Physical, Moral, Personal, Family, Social, and Academic/Work; (4) Supplementary scores: Identity, Satisfaction, and Behavior (Fitts & Warren, 1996). This research study examined 10 components of the above-mentioned four categories: Physical, Moral, Personal, Family, Social, Academic/Work, Identity, Satisfaction, Behavior, and Total.

The Physical Self-Concept scale score represents how persons view their body image, fitness, physical appearance, physical capabilities, and sexuality. Individuals with a high Physical Self-Concept scale score (T≥60) tend to feel healthy and positive about the way their body looks and functions. Persons with a low Physical Self-Concept scale score (T≤40) tend to feel dissatisfied with the way their body looks and functions. The Moral Self-Concept scale score represents how persons view their level of moral and ethical standards and contentment with their religion. Persons with a high Moral Self-Concept scale score (T≥60) tend to be content with the manner in which they conduct themselves. Individuals with a low Moral Self-Concept scale score (T≤40) tend to exhibit difficulty in impulse control or uphold an unrealistically high level of moral/ethical standards (Crain, 1996; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Levy, 1997; McGuire & Tinsley, 1981; Roffe, 1981; Roid & Fitts, 1989; Stein, 1996; Wells & Marwell, 1976; Wylie, 1974).

The Personal Self-Concept scale score represents how persons view their worth and their level of self-evaluation, which does not come from their body or interactions with
others. Individuals with a high Personal Self-Concept scale score (T≥60) tend to feel positive about themselves and their relationships with others. Persons with a low Personal Self-Concept scale score (T≤40) tend not to have a solid sense of self and sway with the differing opinions of others. The Family Self-Concept scale score represents how persons view their worth in their family and how they view their relationships with family. Individuals with a high Family Self-Concept scale score (T≥60) tend to feel accepted, valued, and supported by their relationships with family. Persons with a low Family Self-Concept scale score (T≤40) tend to feel separated, disconnected, and dissatisfied with their relationships with family (Bishop et al., 1997; Bracken, 1996; Feiring & Taska, 1996; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Levy, 1997; Roffe, 1981; Roid & Fitts, 1989; Wylie, 1974).

The Social Self-Concept scale score represents how individuals feel valued and competent in their social environment. Persons with a high Social Self-Concept scale score (T≥60) tend to be outgoing, cooperative, and friendly. Individuals with a low Social Self-Concept scale score (T≤40) tend to feel uneasy in social situations and isolated (Berndt & Burgy, 1996; Bishop et al., 1997; Bracken, 1996; Feiring & Taska, 1996; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Levy, 1997; Roid & Fitts, 1989). The Academic/Work Self-Concept scale score represents how persons perceive themselves as functioning in school or work and how others perceive them. Persons with a high Academic/Work Self-Concept scale score (T≥60) tend to feel self-assured, capable, and secure in their academic and work environments. Individuals with a low Academic/Work Self-Concept scale score (T≤40) tend to express difficulty, and a lack
of confidence, in performing in their academic and work environments (Bracken, 1996; Byrne, 1996a; Fitts & Warren, 1996; Hattie & Marsh, 1996).

The Identity Self-Concept score represents how persons identify themselves and says, “This is who I am.” The Satisfaction Self-Concept score represents the perception of their level of self-acceptance and contentment and says, “This is how satisfied I am with myself.” The Behavior Self-Concept score represents the perception of their actions and behavior and says, “This is the way I act or what I do” (Bishop et al., 1997; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Fleming & Courtney, 1984; Harter, 1996; Marsh & Hattie, 1996; McGuire & Tinsley, 1981; Roid & Fitts, 1989; Wells & Marwell, 1976; Wylie, 1974).

The Total Self-Concept score is an important summary score because it indicates the overall self-concept and the affiliated level of self-esteem. Persons with a high Total Self-Concept score ($T > 60$) tend to view themselves as worthy, competent, and confident. Individuals with a low Total Self-Concept score ($T < 40$) tend to view themselves as unworthy, incompetent, and unsure of themselves and their abilities. They may also exhibit symptoms of depression (Bishop et al., 1997; Fitts, 1965, 1970, 1972a, 1972b; Fitts et al., 1971; Fitts & Hamner, 1969; Fitts & Warren, 1996; Fleming & Courtney, 1984; Keith & Bracken, 1996; Levin et al., 1978; Levy, 1997; Marsh & Hattie, 1996; McGuire & Tinsley, 1981; Roffe, 1981; Roid & Fitts, 1989; Wells & Marwell, 1976; Wylie, 1974).

**Beck Depression Inventory-II**

The Beck Depression Inventory (BDI) was originally developed by Beck et al. in
1961 but this research is utilizing the Beck Depression Inventory-II (BDI-II) which was revised in 1996 by Beck, Steer, and Brown (Beck, Steer, Ball, & Ranieri, 1996; Hill et al., 1986; Merkley, 1997; Steer, Ball, Ranieri, & Beck, 1997; Steer et al., 1999; Steer, Rissmiller, & Beck, 2000; Whisman, Perez, & Ramel, 2000). The BDI-II consists of 21 items designed to assess the level of depression in clinical and non-clinical populations. Each item contains a list of four statements which are placed in an increasing level of severity regarding a certain symptom of depression. The BDI-II takes 5 minutes to complete and continues to be used with ages 13-80 (Beck, Steer, Ball, et al., 1996; Beck, Steer, & Brown, 1996; Hill et al., 1986; Merkley, 1997; Smith & Erford, 1998; Steer et al., 1999; Steer, Clark, Beck, & Ranieri, 1998).

The BDI-II tends to represent and measure the cognitive-affective and somatic dimensions of depressive symptomatology. The 21 items claim to measure the "following symptoms and attitudes": Sadness, Pessimism, Past Failure, Loss of Pleasure, Guilty Feelings, Punishment Feelings, Self-Dislike, Self-Criticalness, Suicidal Thoughts or Wishes, Crying, Agitation, Loss of Interest, Indecisiveness, Worthlessness, Loss of Energy, Change in Sleeping Pattern, Irritability, Change in Appetite, Concentration Difficulty, Tiredness or Fatigue, and Loss of Interest in Sex. The total score is obtained by summing the highest rating of each circled item and adding the total number of points for all items. Each item has four choices and is rated on a 4-point scale which ranges from zero to three points. The guidelines for scoring ranges are: 0-13 Minimal/Nondepressed Range; 14-19 Mild Range; 20-28 Moderate Range; 29-63 Severe Range (Beck, Steer, Ball, et al., 1996; Beck, Steer, & Brown, 1996; Steer et al., 1999; Steer & Clark, 1997; Steer, Kumar,
From the initiation of research using the BDI and continuing with the BDI-II, researchers have used a wide range of cut scores to designate nondepressed/asymptomatic and depressed groups. This wide range of cut scores varies with the purpose of the research study and the sample. Researchers, in many studies using the BDI, pick a cut score of 9 (Minimal) which correlates to 13 (Minimal) in the BDI-II. Other researchers using the BDI have picked a cut score of 19 (Mild; Mild-Moderate) which also correlates to 19 (Mild) in the BDI-II. The cut score of 19 is often used when researchers are dividing the subjects into two categories: nondepressed/asymptomatic and depressed. When examining college students, many researchers select 13 (Minimal) for a cut score. Therefore, I have chosen to also use 13 as the cut score in looking at undergraduate and graduate students. One cannot assume that if subjects from a nonclinical sample receive high BDI-II scores this accurately reflects a depressive disorder. Also, one cannot assume that if subjects from a nonclinical sample receive low BDI-II scores that this accurately reflects the absence of a depressive disorder (American Psychiatric Association, 2000; Beck et al., 1988; Beeber, 1999; Clark et al., 1998; Golin & Hartz, 1979; Gorenstein et al., 1995; Hammen, 1978; Hatzenbuehler et al., 1983; Smits & Oliver, 1982; Steer, Ball, et al., 1997; Steer & Clark, 1997; Wiseman & Guttfreund, 1995; Zimmerman, 1986).

An advantage of the BDI-II is being aligned with the American Psychiatric Association's (1994) *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* and the *DSM-IV-TR* criteria for depression. In order to be aligned with the *DSM-IV* and the *DSM-IV-TR* criteria for depression, some important changes in the
BDI-II were accomplished: (1) the time line for depressive symptoms was changed from 1 week to 2 weeks; (2) sleep and appetite disturbances were revised to assess both ends of the spectrum—increases and decreases; (3) names of several items were changed, for example: irritability changed to agitation; body image changed to worthlessness; and work difficulty changed to loss of energy (American Psychiatric Association, 1994, 2000; Beck, Steer, Ball, et al., 1996; Beck, Steer, & Brown, 1996; Endler, Rutherford, & Denisoff, 1999; Osman et al., 1997; Steer, Ball, et al., 1997; Steer et al., 1999; Steer & Clark, 1997; Steer, Clark, et al., 1998; Steer, Kumar, et al., 1998; Steer et al., 2000; Waller, 1998; Whisman et al., 2000).

In 1996, Beck, Steer, Ball, et al. compared the amended Beck Depression Inventory (BDI-IA) and the BDI-II by administering the instruments to 140 adult psychiatric outpatients and found coefficient alphas of .89 (BDI-IA) and .91 (BDI-II) (Steer, Kumar, et al., 1998; Steer et al., 2000; Whisman et al., 2000). Beck, Steer, and Brown (1996) tested the original and new items with an outpatient sample (N = 500) and a college student sample (N = 120). The BDI-II demonstrated reliability (Coefficient Alpha = .92, p < .001 for the outpatient sample; Coefficient Alpha = .93, p<.001 for the college student sample) higher than the BDI (Coefficient Alpha = .86). The test-retest reliability estimate = .93 with the test-retest period approximately 1 week apart. The researchers examined convergent validity by correlating scores on the BDI-II with scores on the Revised Hamilton Psychiatric Rating Scale for Depression (HPRSD-R) (r = .71). In 1997, Steer, Ball, et al. examined convergent validity by correlating scores on the BDI-II with scores on the Symptom Checklist-90- Revised (SCL-90-R) (r = .89). The researchers then concluded
that the BDI-II can be presently utilized while still pulling from the sizable existing
literature on the BDI (Beck, Steer, Ball, et al., 1996; Beck, Steer, & Brown, 1996; Smith &
Erford, 1998; Steer & Clark, 1997; Steer et al., 1999; Steer, Clark, et al., 1998).

The BDI-II is a screening tool and is not designed to be the sole factor in
diagnosing a DSM-IV-TR mood disorder. Beck, Steer, and Brown (1996) stated:

The BDI-II was developed as an indicator of the presence and degree of depressive
symptoms consistent with the DSM-IV, not as an instrument for specifying a
clinical diagnosis. The BDI-II should be used cautiously as the sole diagnostic
measure because depression may accompany a variety of primary diagnostic
disorders ranging from panic disorder to schizophrenia. (p. 6)

So, the total BDI-II score is a way to represent the presence/absence of depressive
symptoms, not clinical depression (American Psychiatric Association, 2000; Beck et al.,
1988; Beeber, 1999; Clark et al., 1998; Golin & Hartz, 1979; Gorenstein et al., 1995;
Hammen, 1978; Hatzenbuehler et al., 1983; Smits & Oliver, 1982; Steer, Ball, et al., 1997;
Steer & Clark, 1997; Wiseman & Guttfreund, 1995; Zimmerman, 1986).

Data Collection

During Fall Semester 2000, I applied to AU’s Human Subjects Review Board
(HSRB) for permission to conduct this research study. After HSRB approval from AU was
obtained, a copy of this HSRB approval and the completed WMU application for Human
Subjects Institutional Review Board (HSIRB) was sent to WMU. While awaiting HSIRB
approval from WMU, classes were chosen from the Fall 2000/Winter 2001 catalogs from
AU and WMU on the undergraduate and/or graduate level. Each professor of the selected
class at AU was contacted, informed of the research study, and asked to participate. Class
times were scheduled for me to meet the class and collect the data. After HSIRB approval from WMU, each professor of the selected class at WMU was contacted, informed of the research study, and asked to participate. Class times were scheduled for me to meet the class and collect the data.

I met, at the agreed upon date, with each instructor and class. Due to the different specifications of AU’s HSRB approval and WMU’s HSIRB approval, slightly different introductory instructions were given. These are the introductory instructions given at AU. At the beginning of my scheduled time, I distributed one manila envelope (packet) to each student and I said the following: “My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which basically looks at what people think and feel about themselves, their world, and their future. I am here today to ask for your participation in this research study which will take about 15-20 minutes to complete three research instruments. Your name or identification (ID) number will not be used in any way so your responses will be confidential and anonymous. I want to emphasize that your participation in this study is completely voluntary. If you choose to not participate, you will not be penalized in any way. If you choose to participate, you are still free to withdraw at any time during the testing process without any penalty. I do not anticipate anything happening but, for example, if answering any of the questions brings up thoughts and feelings and/or issues for you. I recommend that you contact the counseling center here at Andrews to talk with someone. Are there any questions? Those that do not wish to participate may leave the room now and I will let you know when we are finished. So, let’s get started. I’d like you
to use a pen, if possible, to complete the instruments."

These are the introductory instructions given at WMU. At the beginning of my scheduled time, I distributed one manila envelope (packet) to each student and I said the following: "My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which basically looks at what people think and feel about themselves, their world, and their future. I am here today to ask for your participation in this research study which will take about 15-20 minutes to complete three research instruments. Your name or identification (ID) number will not be used in any way so your responses will be anonymous. I want to emphasize that your participation in this study is completely voluntary. If you choose to not participate, you will not be penalized in any way. If you choose to participate, you are still free to withdraw at any time during the testing process without any penalty. I do not anticipate anything happening but, for example, if answering any of the questions brings up thoughts and feelings and/or issues for you, I recommend that you contact the counseling center here at Western to talk with someone. Are there any questions? Those who choose to not participate may return the blank forms and stay in your seats. So, let's get started. I'd like you to use a pen, if possible, to complete the instruments."

Then, as I held up my copy of the Demographic Questionnaire, I asked each student to take out the first page of the packet, which was the Demographic Questionnaire. I then asked the students to read the instructions, ask any questions, and then complete the Demographic Questionnaire which would take 1 minute or less. Next, as I held up my copy of the TSCS:2, I asked them to take out the second page of the packet, which was
the TSCS:2. I reminded them not to fill in any identifying information but to read the instructions, ask any questions, and then complete the TSCS:2, which would take about 12 minutes. I instructed them that when they were through with the first page, which took approximately 6 minutes, to just turn it over without tearing off anything and complete the second page. Next, as I held up my copy of the BDI-II, I asked each student to look at the last page of the packet which was the BDI-II. Again, they were reminded not to fill in any identifying information but to read the instructions, ask any questions, and complete the instrument, which would take about 2-5 minutes. After the BDI-II was completed, I asked the students to return the three research instruments to the manila envelope, seal it, and give it to me. I then thanked them for their participation.

**Null Hypotheses and Methods of Analysis**

Six null hypotheses were tested. Null Hypothesis 1 related to Research Question 1 and Research Hypothesis 1. Null Hypothesis 2 looked at Research Question 2 and Research Hypothesis 2. Null Hypothesis 3 and Null Hypotheses 5 and 6 looked at Research Question 3 and Research Hypothesis 3, as I studied these questions with univariate and multivariate analyses. Finally, Null Hypothesis 4 related to Research Question 4 and Research Hypothesis 4.

*Null Hypothesis 1.* There is no significant difference between undergraduate and graduate students with respect to the scores on the BDI-II.

This hypothesis was tested in 2 ways: (1) by the t-test for means of independent samples using the raw BDI-II scores and the independent variable was program level and

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the dependent variable was depression scores, and (2) by chi-square analysis using the proportion of undergraduate and graduate students at each of the four groups of depression as indicated by the BDI-II.

*Null Hypothesis 2.* There is no significant difference between the undergraduate and graduate students with respect to the mean scores on the TSCS:2.

This hypothesis leads to 10 subhypotheses:

a. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Physical subscale score of the TSCS:2.

b. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Moral subscale score of the TSCS:2.

c. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Personal subscale score of the TSCS:2.

d. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Family subscale score of the TSCS:2.

e. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Social subscale score of the TSCS:2.

f. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Academic/Work subscale score of the TSCS:2.

g. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Identity subscale score of the TSCS:2.

h. There is no significant difference between the undergraduate and graduate
students with respect to the mean score on the Satisfaction subscale score of the TSCS:2.

i. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Behavior subscale score of the TSCS:2.

j. There is no significant difference between the undergraduate and graduate students with respect to the mean score on the Total subscale score of the TSCS:2.

Null Hypothesis 3. There is no significant difference among the four BDI-II groups with respect to the mean scores on the TSCS:2.

This hypothesis leads to 10 subhypotheses (3a to 3j) parallel to those under Hypothesis 2.

Null Hypothesis 4. There is no significant interaction between BDI-II group and program level with respect to scores on the TSCS:2.

This hypothesis leads to 10 subhypotheses (4a to 4j) parallel to those under Hypothesis 2.

Hypotheses 2-4 were tested by two-way ANOVA (2 X 4). The two factors, or independent variables, were program level and BDI-II group and the dependent variable was the TSCS:2

Null Hypothesis 5. There is no linear combination of the nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II groups for undergraduate students.

Null Hypothesis 6. There is no linear combination of the nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II groups for graduate students.
Null Hypotheses 5 and 6 were tested by discriminant analysis. The independent variable was TSCS:2 scores and the dependent variable was BDI-II group.

All hypotheses were tested with alpha at .05.

**Power Analysis**

With alpha = .05, power = .90, and medium effect size $f = .25$, sample size tables (Cohen, 1969, p. 377) yield the following:

1. For main effect BDI-II, with four levels and $df = 3$, the minimum sample size is 58 for each of the four levels, $58/2 = 29$ per cell for a total $N$ of 232.

2. For main effect program, with two levels and $df = 1$, the minimum sample size is 85 for each class, $85/4 = 21.25$ per cell for a total $n$ of 170.

Therefore, to ensure power of .90, a sample size of 232 was sought.

For the discriminant analysis, with nine subscale scores, a total $N$ of 232 provides over 25 subjects per scale. This more than meets the suggested criterion of at least 10 subjects per scale.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

This chapter presents descriptive data relating to the sample and the instruments. It also presents the results of testing the hypotheses.

Description of Sample

The sample for this study consisted of 239 undergraduate and graduate students from Andrews University (AU) and Western Michigan University (WMU). Participation in the study was completely voluntary. The convenience sample was obtained by asking various professors from different departments for permission to administer the research packet (the Demographic Questionnaire, the Tennessee Self-Concept Scale: Second Edition [TSCS:2], and Beck Depression Inventory-II [BDI-II]) to the students in each of their classes. Although a total of 280 research packets was distributed, 7 packets were not used due to the age (17 or below) of the subjects, 19 packets were not used due to improper completion of instruments by the subjects, and 15 packets were not used due to improper instruction by a class professor, which left the total number of participants to be 239 ($N = 239$).
Table 1 presents a description of the sample in terms of gender. Table 2 presents a description of the sample in terms of age. The findings in Table 1 indicate that the majority of the participants were female (58.6%) and 41% were male. The findings in Table 2 indicate that, of the 239 total participants, 49.8% were between the ages of 18-24 and 29.7% were between the ages of 25-34.

Table 3 presents a description of the sample in terms of marital status. The findings in Table 3 indicate that the majority of the participants were single (63.2%) and 30.5% were married. Table 4 presents a description of the sample in terms of ethnic origin. The findings in Table 4 indicate that just over 50% (50.6) of the participants were Caucasian, 13% were Asian Origin, 10.9% were African American, 7.5% were of Caribbean Origin, and 6.3% were Latino/Hispanic.

Table 5 presents a description of the sample in terms of current program level. The findings in Table 5 indicate that in the breakdown of the participants in their current program level, 20.9% were seniors on the undergraduate level, 14.6% were freshmen on the undergraduate level, 28.0% were master's students (1st year) on the graduate level, 15.9% were master’s students (2nd year) on the graduate level, and 6.3% (combined total) were Ph.D. students.
Table 1

*Gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>98</td>
<td>41.0</td>
</tr>
<tr>
<td>Female</td>
<td>140</td>
<td>58.6</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>0.4</td>
</tr>
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</table>

Table 2

*Age*

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 or below</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>18-24</td>
<td>119</td>
<td>49.8</td>
</tr>
<tr>
<td>25-34</td>
<td>71</td>
<td>29.7</td>
</tr>
<tr>
<td>35-44</td>
<td>32</td>
<td>13.4</td>
</tr>
<tr>
<td>45-54</td>
<td>14</td>
<td>5.9</td>
</tr>
<tr>
<td>55-64</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>65 and over</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Table 3

*Marital Status*

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>151</td>
<td>63.2</td>
</tr>
<tr>
<td>Cohabited</td>
<td>5</td>
<td>2.1</td>
</tr>
<tr>
<td>Married</td>
<td>73</td>
<td>30.5</td>
</tr>
<tr>
<td>Separated/Divorced</td>
<td>10</td>
<td>4.2</td>
</tr>
<tr>
<td>Widowed</td>
<td>0</td>
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</tr>
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</table>

Table 4

*Ethnic Origin*

<table>
<thead>
<tr>
<th>Ethnic Origin</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>26</td>
<td>10.9</td>
</tr>
<tr>
<td>African Origin</td>
<td>9</td>
<td>3.8</td>
</tr>
<tr>
<td>Asian American</td>
<td>6</td>
<td>2.5</td>
</tr>
<tr>
<td>Asian Origin</td>
<td>31</td>
<td>13.0</td>
</tr>
<tr>
<td>Caribbean Origin</td>
<td>18</td>
<td>7.5</td>
</tr>
<tr>
<td>Caucasian</td>
<td>121</td>
<td>50.6</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>15</td>
<td>6.3</td>
</tr>
<tr>
<td>Multiracial</td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>Native American</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>2.5</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>0.4</td>
</tr>
</tbody>
</table>
Table 5

*Current Program Level*

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>35</td>
<td>14.6</td>
</tr>
<tr>
<td>Sophomore</td>
<td>16</td>
<td>6.7</td>
</tr>
<tr>
<td>Junior</td>
<td>18</td>
<td>7.5</td>
</tr>
<tr>
<td>Senior</td>
<td>50</td>
<td>20.9</td>
</tr>
<tr>
<td>Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA 1 (1st Year)</td>
<td>67</td>
<td>28.0</td>
</tr>
<tr>
<td>MA 2 (2nd Year)</td>
<td>38</td>
<td>15.9</td>
</tr>
<tr>
<td>PhD 1 (1st Year)</td>
<td>12</td>
<td>5.0</td>
</tr>
<tr>
<td>PhD 2 (2nd Year)</td>
<td>3</td>
<td>1.3</td>
</tr>
<tr>
<td>PhD 3+ (3rd Year and +)</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Table 6 presents a description of the sample in terms of GPA group. Table 7 presents a description of the sample in terms of religion. The findings in Table 6 indicate that 96 of the participants (40.2%) reported having a GPA that fell between the range of 3.9-3.5. There were 29.7% of the participants who reported their GPA to be between 3.4-3.0. The findings in Table 7 indicate that the majority of the participants (69.4%) reported being Protestant and 17.6% reported "other" as their religion.
Table 6

GPA Group

<table>
<thead>
<tr>
<th>GPA Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>27</td>
<td>11.3</td>
</tr>
<tr>
<td>3.9-3.5</td>
<td>96</td>
<td>40.2</td>
</tr>
<tr>
<td>3.4-3.0</td>
<td>71</td>
<td>29.7</td>
</tr>
<tr>
<td>2.9-2.5</td>
<td>33</td>
<td>13.8</td>
</tr>
<tr>
<td>2.4-2.0</td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>1.9-1.5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>1.4-1.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>No Response</td>
<td>8</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Table 7

Religion

<table>
<thead>
<tr>
<th>Religion</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protestant</td>
<td>166</td>
<td>69.4</td>
</tr>
<tr>
<td>Catholic</td>
<td>17</td>
<td>7.1</td>
</tr>
<tr>
<td>Jewish</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Islamic</td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>Other</td>
<td>42</td>
<td>17.6</td>
</tr>
<tr>
<td>No Response</td>
<td>10</td>
<td>4.2</td>
</tr>
</tbody>
</table>
General Description of Instruments

Table 8 presents a description of the data on the TSCS:2. The Alpha levels for the nine subscales reached .78 or higher and each appears to be fully adequate for the study. These findings are compatible with the internal consistency estimate ranges of the TSCS:2 (.73 to .95). All of the nine TSCS:2 subscale variables utilized the upper end of the possible range of scores while not utilizing the lower end. This finding indicates that the participants appeared to respond less negatively when reporting on their self-concept.

Table 9 presents the frequency of cases in the four BDI-II groups for undergraduate and graduate students. The four BDI-II groups are as follows: Group 1 (0-13 Minimal/Nondepressed (ND) Range), Group 2 (14-19 Mild Range), Group 3 (20-28 Moderate Range), and Group 4 (29-63 Severe Range). The possible range of BDI-II scores was 0-63 with the actual range of scores being 0-56. The findings in Table 9 indicate the following for both undergraduate and graduate students: BDI-II Group 1 (0-13 Minimal/Nondepressed (ND) Range) held the vast majority of participants ($n = 197$); BDI-II Group 2 (14-19 Mild Range) held a total of 21 participants; BDI-II Group 3 (20-28 Moderate Range) held a total of 13 participants; and BDI-II Group 4 (29-63 Severe Range) held the fewest participants ($n = 8$). So, the comparison among the BDI-II groups tends not to be very strong because there are so few participants in Group 4.
Table 8  

*Data on TSCS:2*

<table>
<thead>
<tr>
<th>TSCS:2</th>
<th>Possible Range of Scores</th>
<th>Actual Range of Scores</th>
<th>Mean of Scores</th>
<th>Standard Deviation</th>
<th>Reliability Coefficient Alphas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>14-70</td>
<td>27-68</td>
<td>53.87</td>
<td>7.15</td>
<td>.83</td>
</tr>
<tr>
<td>Moral</td>
<td>12-60</td>
<td>24-60</td>
<td>47.64</td>
<td>6.51</td>
<td>.84</td>
</tr>
<tr>
<td>Personal</td>
<td>12-60</td>
<td>23-60</td>
<td>48.30</td>
<td>5.86</td>
<td>.82</td>
</tr>
<tr>
<td>Family</td>
<td>12-60</td>
<td>24-60</td>
<td>47.78</td>
<td>6.47</td>
<td>.81</td>
</tr>
<tr>
<td>Social</td>
<td>12-60</td>
<td>33-60</td>
<td>48.11</td>
<td>5.63</td>
<td>.79</td>
</tr>
<tr>
<td>Academic-Work</td>
<td>12-60</td>
<td>27-60</td>
<td>46.30</td>
<td>6.13</td>
<td>.78</td>
</tr>
<tr>
<td>Identity</td>
<td>21-105</td>
<td>59-104</td>
<td>90.27</td>
<td>8.17</td>
<td>.85</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>21-105</td>
<td>43-102</td>
<td>78.41</td>
<td>10.88</td>
<td>.86</td>
</tr>
<tr>
<td>Behavior</td>
<td>20-100</td>
<td>50-98</td>
<td>77.03</td>
<td>8.35</td>
<td>.81</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>82-410</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Table 9

Scores on the BDI-II

<table>
<thead>
<tr>
<th>Program Level</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>93</td>
<td>11</td>
</tr>
<tr>
<td>Graduate</td>
<td>104</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>21</td>
</tr>
</tbody>
</table>

Testing the Hypotheses

Each of the six null hypotheses is presented along with the appropriate statistical analysis.

Null Hypothesis 1

Null Hypothesis 1. There is no significant difference between undergraduate and graduate students with respect to the scores on the BDI-II.

This null hypothesis was tested in two ways: (1) by the t-test for means of independent samples using the raw BDI-II scores; and (2) by chi-square analysis using the proportion of undergraduate and graduate students in each of the four depression groups as indicated by the BDI-II. The independent variable was program level and the dependent variable was depression scores.

Null Hypothesis 1 was tested by means of the t-test for independent samples. The means of the undergraduate and graduate groups were 8.83 and 6.73 respectively. The
variances were significantly different \((p = 0.0122)\), so the separate sample \(t\)-test was used, yielding a \(t\) of 2.01 and a probability level of 0.046. The difference between the two means, undergraduate and graduate, is significant. When the raw scores were compared, the undergraduate mean depression score was significantly higher than the graduate mean depression score. Undergraduate students demonstrated higher mean depression scores on the BDI-II than the graduate students. This null hypothesis is thus rejected.

Null Hypothesis 1 was also tested by chi-square analysis. Table 10 presents the frequency and percentage of the four BDI-II groups and the program levels. The results of the test given are \(X^2 = 5.85\) with \(df = 3\) and \(p = 0.1191\). The findings in Table 10 indicate that although the obtained raw scores are significantly different, when they are placed in the four BDI-II groups, there is no significant difference between the proportion of undergraduate and graduate students in each BDI-II group. The hypothesis is thus retained.

Table 10

Contingency Table for Hypothesis 1 (b) (Percentages Given in Parentheses)

<table>
<thead>
<tr>
<th>BDI-II Groups</th>
<th>Program Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Undergraduate</td>
<td>Graduate</td>
</tr>
<tr>
<td>Nondepressed</td>
<td>93 (78.2)</td>
<td>104 (86.7)</td>
</tr>
<tr>
<td>Mild</td>
<td>11 (9.2)</td>
<td>10 (8.3)</td>
</tr>
<tr>
<td>Moderate</td>
<td>8 (6.7)</td>
<td>5 (4.2)</td>
</tr>
<tr>
<td>Severe</td>
<td>7 (5.9)</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>120</td>
</tr>
</tbody>
</table>
Null Hypotheses 2, 3, and 4

These three null hypotheses were tested by a single analysis, two-way ANOVA (2 X 4). This analysis was done 10 times, once for each of the sub-hypotheses (a-j) for each subtest and the total. They are therefore presented together. The two factors, or independent variables, were program level and BDI-II group and the dependent variable was the TSCS:2.

Null Hypothesis 2. There is no significant difference between the undergraduate and graduate students with respect to the mean scores on the TSCS:2.

Null Hypothesis 3. There is no significant difference among the four BDI-II groups with respect to the mean scores on the TSCS:2.

Null Hypothesis 4. There is no significant interaction between the BDI-II group and program level with respect to scores on the TSCS:2.

Null Hypotheses 2, 3, 4a, Physical subscale

Table 11 presents the means for the Physical TSCS:2 subscale score and the BDI-II groups. Table 12 presents the results of the analysis of variance. As there is no significant interaction, Null Hypothesis 4a is retained and main effects may be studied. Null Hypothesis 2a is retained because there is no significant difference between undergraduate and graduate students on Physical Self-Concept. Null Hypothesis 3a is rejected because there is a significant difference among the BDI-II groups on Physical Self-Concept.

Because of the very different group sizes or frequencies, a post hoc Scheffé test
was used to compare all pairs of observed group means. As this test is so conservative, an alpha of .10 was used, as recommended by Scheffé (Scheffé, 1959). This test indicated that Group 1 is significantly higher than Groups 2, 3, and 4; Groups 2 and 3 are significantly higher than Group 4; and Groups 2 and 3 are not significantly different with respect to means on the Physical subscale of the TSCS:2. Thus, those who are nondepressed show significantly higher Physical Self-Concept scores than those with mild, moderate, and severe depression; those with mild and moderate depression show significantly higher Physical Self-Concept scores than those with severe depression; and there is no significant difference in Physical Self-Concept scores between those with mild and moderate depression.

Table 11

*Means Table for Physical TSCS:2 Subscale Score and BDI-II Groups*

<table>
<thead>
<tr>
<th></th>
<th>ND</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>54.968</td>
<td>50.091</td>
<td>49.500</td>
<td>37.143</td>
<td>53.101</td>
</tr>
<tr>
<td>Graduate</td>
<td>55.654</td>
<td>47.600</td>
<td>48.800</td>
<td>49.000</td>
<td>54.642</td>
</tr>
<tr>
<td>Total</td>
<td>55.330</td>
<td>48.905</td>
<td>49.231</td>
<td>38.625</td>
<td>53.875</td>
</tr>
</tbody>
</table>

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Table 12

Summary of the Analysis of Variance for Physical TSCS:2 Subscale and BDI-II Groups

<table>
<thead>
<tr>
<th>Physical</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>1590.276</td>
<td>3</td>
<td>530.092</td>
<td>13.658</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>52.090</td>
<td>1</td>
<td>52.090</td>
<td>1.342</td>
<td>.248</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>165.849</td>
<td>3</td>
<td>55.283</td>
<td>1.424</td>
<td>.236</td>
</tr>
<tr>
<td>Total</td>
<td>705910.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.

Null Hypotheses 2, 3, 4b, Moral subscale

Table 13 presents the means for the Moral TSCS:2 subscale score and the BDI-II groups. Table 14 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4b is retained and main effects may be studied. Null Hypothesis 2b is retained because there is no significant difference between undergraduate and graduate students on Moral Self-Concept. Null Hypothesis 3b is rejected because there is a significant difference among the BDI-II groups on Moral Self-Concept.

The Scheffe test (p = .10) findings are that Group 1 is significantly higher than Groups 2, 3, and 4; and Groups 2, 3, and 4 are not significantly different with respect to means on the Moral subscale of the TSCS:2. Thus, those who are nondepressed show significantly higher Moral Self-Concept scores than those with mild, moderate, and
severe depression; and there is no significant difference in Moral Self-Concept scores among those with mild, moderate, and severe depression.

Table 13

*Means Table for Moral TSCS:2 Subscale Score and BDI-II Groups*

<table>
<thead>
<tr>
<th>Moral</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND</td>
<td>Mild</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>47.624</td>
<td>43.546</td>
</tr>
<tr>
<td>Graduate</td>
<td>49.683</td>
<td>44.200</td>
</tr>
<tr>
<td>Total</td>
<td>48.711</td>
<td>43.857</td>
</tr>
</tbody>
</table>

Table 14

*Summary of the Analysis of Variance for Moral TSCS:2 Subscale and BDI-II Groups*

<table>
<thead>
<tr>
<th>Moral</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>1101.509</td>
<td>3</td>
<td>367.170</td>
<td>10.140</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>11.266</td>
<td>1</td>
<td>11.266</td>
<td>.311</td>
<td>.578</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>263.497</td>
<td>3</td>
<td>87.832</td>
<td>2.426</td>
<td>.066</td>
</tr>
<tr>
<td>Total</td>
<td>552473.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.
null hypothesis 2, 3, 4c, personal subscale

Table 15 presents the means for the Personal TSCS:2 subscale score and the BDI-II groups. Table 16 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4c is retained and main effects may be studied. Null Hypothesis 2c is retained because there is no significant difference between undergraduate and graduate students on Personal Self-Concept. Null Hypothesis 3c is rejected because there is a significant difference among the BDI-II groups on Personal Self-Concept.

The Scheffé test ($p = .10$) findings are that Group 1 is significantly higher than Groups 2, 3, and 4; Groups 2 and 3 are significantly higher than Group 4; and Groups 2 and 3 are not significantly different with respect to means on the Personal subscale of the TSCS:2. Thus, those who are nondepressed show significantly higher Personal Self-Concept scores than those with mild, moderate, and severe depression; those with mild and moderate depression show significantly higher Personal Self-Concept scores than those with severe depression; and there is no significant difference in Personal Self-Concept scores between those with mild and moderate depression.
### Table 15
*Means Table for Personal TSCS:2 Subscale Score and BDI-II Groups*

<table>
<thead>
<tr>
<th>Personal</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND</td>
<td>Mild</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>49.376</td>
<td>45.909</td>
</tr>
<tr>
<td>Graduate</td>
<td>49.875</td>
<td>43.900</td>
</tr>
<tr>
<td>Total</td>
<td>49.640</td>
<td>44.952</td>
</tr>
</tbody>
</table>

### Table 16
*Summary of the Analysis of Variance for Personal TSCS:2 Subscale and BDI-II Groups*

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>1441.408</td>
<td>3</td>
<td>480.469</td>
<td>20.068</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>48.741</td>
<td>1</td>
<td>48.741</td>
<td>2.036</td>
<td>.155</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>95.231</td>
<td>3</td>
<td>31.744</td>
<td>1.326</td>
<td>.267</td>
</tr>
<tr>
<td>Total</td>
<td>565802.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* *p = .05.*
Table 17 presents the means for the Family TSCS:2 subscale score and the BDI-II groups. Table 18 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4d is retained and main effects may be studied. Null Hypothesis 2d is retained because there is no significant difference between undergraduate and graduate students on Family Self-Concept. Null Hypothesis 3d is rejected because there is a significant difference among the BDI-II groups on Family Self-Concept.

The Scheffe test (\( p = .10 \)) findings are that Group 1 is significantly higher than Groups 2, 3, and 4; Group 2 is significantly higher than Group 4; Groups 2 and 3 are not significantly different with respect to means on the Family subscale of the TSCS:2; and Groups 3 and 4 are not significantly different with respect to means on the Family subscale of the TSCS:2. Thus, those who are nondepressed show significantly higher Family Self-Concept scores than those with mild, moderate, and severe depression; those with mild depression show significantly higher Family Self-Concept scores than those with severe depression; there is no significant difference in Family Self-Concept scores between those with mild and moderate depression; and there is no significant difference in Family Self-Concept scores between those with moderate and severe depression.
Table 17

*Means Table for Family TSCS:2 Subscale Score and BDI-II Groups*

<table>
<thead>
<tr>
<th>Family</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND</td>
<td>Mild</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>48.656</td>
<td>46.182</td>
</tr>
<tr>
<td>Graduate</td>
<td>49.404</td>
<td>41.300</td>
</tr>
</tbody>
</table>

| Total       | 49.051        | 43.857 | 42.154   | 36.000 | 47.782 |

Table 18

*Summary of the Analysis of Variance for Family TSCS:2 Subscale and BDI-II Groups*

<table>
<thead>
<tr>
<th>Family</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>1346.143</td>
<td>3</td>
<td>448.714</td>
<td>13.580</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>.820</td>
<td>1</td>
<td>.820</td>
<td>.025</td>
<td>.875</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>198.205</td>
<td>3</td>
<td>66.068</td>
<td>1.999</td>
<td>.115</td>
</tr>
<tr>
<td>Total</td>
<td>555672.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.
Null Hypothesis 2, 3, 4e, Social subscale

Table 19 presents the means for the Social TSCS.2 subscale score and the BDI-II groups. Table 20 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4e is retained and main effects may be studied. Null Hypothesis 2e is retained because there is no significant difference between undergraduate and graduate students on Social Self-Concept. Null Hypothesis 3e is rejected because there is a significant difference among the BDI-II groups on Social Self-Concept.

The Scheffé test \( (p = .10) \) findings are that Group 1 is significantly higher than Groups 2 and 4; Groups 1 and 3 are not significantly different with respect to means on the Social subscale of the TSCS.2; and Groups 2, 3, and 4 are not significantly different with respect to means on the Social subscale of the TSCS.2. Thus, those who are nondepressed show significantly higher Social Self-Concept scores than those with mild and severe depression: there is no significant difference in Social Self-Concept scores between those who are nondepressed and those with moderate depression; and there is no significant difference in Social Self-Concept scores among those with mild, moderate, and severe depression.
### Table 19

*Means Table for Social TSCS:2 Subscale Score and BDI-II Groups*

<table>
<thead>
<tr>
<th>Social</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND</td>
<td>Mild</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>48.817</td>
<td>45.000</td>
</tr>
<tr>
<td>Graduate</td>
<td>48.856</td>
<td>46.000</td>
</tr>
<tr>
<td>Total</td>
<td>48.838</td>
<td>45.476</td>
</tr>
</tbody>
</table>

### Table 20

*Summary of the Analysis of Variance for Social TSCS:2 Subscale and BDI-II Groups*

<table>
<thead>
<tr>
<th>Social</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>694.883</td>
<td>3</td>
<td>231.628</td>
<td>7.956</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>17.142</td>
<td>1</td>
<td>17.142</td>
<td>.589</td>
<td>.444</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>79.474</td>
<td>3</td>
<td>26.491</td>
<td>.910</td>
<td>.437</td>
</tr>
<tr>
<td>Total</td>
<td>560835.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.
Null Hypothesis 2, 3, 4f, Academic/Work subscale

Table 21 presents the means for the Academic/Work TSCS:2 subscale score and the BDI-II groups. Table 22 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4f is retained and main effects may be studied. Null Hypothesis 2f is retained because there is no significant difference between undergraduate and graduate students on Academic/Work Self-Concept. Null Hypothesis 3f is rejected because there is a significant difference among the BDI-II groups on Academic/Work Self-Concept.

The Scheffé test ($p = .10$) findings are that Groups 1, 2, and 3 are significantly higher than Group 4; and Groups 1, 2, and 3 are not significantly different with respect to means on the Academic/Work subscale of the TSCS:2. Thus, those who are nondepressed and those with mild and moderate depression show significantly higher Academic/Work Self-Concept scores than those with severe depression; and there is no significant difference in Academic/Work Self-Concept scores among those who are nondepressed and those with mild and moderate depression.
Table 21

Means Table for Academic Work TSCS:2 Subscale Score and BDI-II Groups

<table>
<thead>
<tr>
<th>Academic/Work</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND</td>
<td>Mild</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>45.839</td>
<td>44.182</td>
</tr>
<tr>
<td>Graduate</td>
<td>47.990</td>
<td>47.500</td>
</tr>
<tr>
<td>Total</td>
<td>46.975</td>
<td>45.762</td>
</tr>
</tbody>
</table>

Table 22

Summary of the Analysis of Variance for Academic Work TSCS:2 Subscale and BDI-II Groups

<table>
<thead>
<tr>
<th>Academic/Work</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>381.518</td>
<td>3</td>
<td>127.173</td>
<td>4.006</td>
<td>.008*</td>
</tr>
<tr>
<td>Program Level</td>
<td>106.285</td>
<td>1</td>
<td>106.285</td>
<td>3.348</td>
<td>.069</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>71.951</td>
<td>3</td>
<td>23.984</td>
<td>.755</td>
<td>.520</td>
</tr>
<tr>
<td>Total</td>
<td>521342.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.
Null Hypothesis 2. 3. 4g. Identity subscale

Table 23 presents the means for the Identity TSCS:2 subscale score and the BDI-II groups. Table 24 presents a summary of the analysis of variance. Because of the significant interaction, Null Hypothesis 4g is rejected and simple effects had to be studied. The results of these 6 one-way ANOVAs are given in Table 25.

Table 25 indicates that there is a significant difference among the BDI-II groups for undergraduates. The post hoc Scheffé test, with \( p = .10 \), was used to compare the pairs of group means. Group 1 is significantly higher than Groups 3 and 4; Group 2 is significantly higher than Groups 3 and 4; Group 3 is significantly higher than Group 4; and Groups 1 and 2 are not significantly different with respect to group means on the Identity subscale of the TSCS:2. Thus, for undergraduate students, those who are nondepressed or those with mild depression show significantly higher Identity Self-Concept scores than those with moderate and severe depression; those with moderate depression show significantly higher Identity Self-Concept scores than those with severe depression; and there is no significant difference in Identity Self-Concept scores between those who are nondepressed and those with mild depression.

Table 25 indicates that there is a significant difference among BDI-II groups for graduates (used Groups 1, 2, and 3 only because Group 4 had only one subject). The post hoc Scheffé test, with \( p = .10 \), was used to compare the pairs of group means. Group 1 is significantly higher than Group 2; Groups 1 and 3 are not significantly different with respect to group means on the Identity subscale of the TSCS:2; and Groups 2 and 3 are not significantly different with respect to group means on the Identity subscale of the TSCS:2.
### Table 23

*Means Table for Identity TSCS:2 Subscale Score and BDI-II Groups*

<table>
<thead>
<tr>
<th>Identity</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND</td>
<td>Mild</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>91.505</td>
<td>88.546</td>
</tr>
<tr>
<td>Graduate</td>
<td>92.423</td>
<td>83.800</td>
</tr>
<tr>
<td>Total</td>
<td>91.990</td>
<td>86.286</td>
</tr>
</tbody>
</table>

### Table 24

*Summary of the Analysis of Variance for Identity TSCS:2 Subscale and BDI-II Groups*

<table>
<thead>
<tr>
<th>Identity</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>$F$</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>2112.827</td>
<td>3</td>
<td>704.276</td>
<td>14.935</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>199.616</td>
<td>1</td>
<td>199.616</td>
<td>4.233</td>
<td>.041*</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>449.482</td>
<td>3</td>
<td>149.827</td>
<td>3.177</td>
<td>.025*</td>
</tr>
<tr>
<td>Total</td>
<td>1963376.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p = .05$.  

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Thus, for graduate students, those who are nondepressed show significantly higher Identity Self-Concept scores than those with mild depression; there is no significant difference in Identity Self-Concept scores between those who are nondepressed and those with moderate depression; and there is no significant difference in Identity Self-Concept scores between those with mild and moderate depression.

Table 25 also shows that there is no significant difference between the undergraduate and graduate students for BDI-II Groups 1, 2, and 3 with respect to group means on the Identity subscale of the TSCS:2. Thus, there is no significant difference in Identity Self-Concept scores between undergraduate and graduate students for those who

<table>
<thead>
<tr>
<th>Effect</th>
<th>$F$</th>
<th>df</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups for Undergraduates</td>
<td>28.642</td>
<td>3,115</td>
<td>&lt;.000*</td>
</tr>
<tr>
<td>BDI-II Groups for Graduates</td>
<td>8.680</td>
<td>2,116</td>
<td>&lt;.000*</td>
</tr>
<tr>
<td>Program for BDI-II Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.918</td>
<td>1,195</td>
<td>.339</td>
</tr>
<tr>
<td>2</td>
<td>2.094</td>
<td>1,19</td>
<td>.164</td>
</tr>
<tr>
<td>3</td>
<td>1.340</td>
<td>1,11</td>
<td>.272</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p = .05$. 

Thus, for graduate students, those who are nondepressed show significantly higher Identity Self-Concept scores than those with mild depression; there is no significant difference in Identity Self-Concept scores between those who are nondepressed and those with moderate depression; and there is no significant difference in Identity Self-Concept scores between those with mild and moderate depression.

Table 25 also shows that there is no significant difference between the undergraduate and graduate students for BDI-II Groups 1, 2, and 3 with respect to group means on the Identity subscale of the TSCS:2. Thus, there is no significant difference in Identity Self-Concept scores between undergraduate and graduate students for those who
are nondepressed and those with mild and moderate depression.

This result may be surprising in light of the fact that Table 24 shows a significant main effect for program level, despite the interaction. Two factors account for the loss of significance in the simple effects. First, the error degrees of freedom are reduced from 232 to 195, 19, and 11 respectively. Secondly, and more important, the one graduate student in BDI-II Group 4 had a very high Identity score, and made no contribution to the error variance, as this student was the only score in the group.

I therefore reran the ANOVA omitting this individual, and thus using only 3 BDI-II groups. This analysis produced no significant interaction ($p = .180$) and no significant program level effect ($p = .313$) The BDI-II group effect was significant ($p = .000$).

Null Hypothesis 2, 3, 4h. Satisfaction subscale

Table 26 presents the means for the Satisfaction TSCS:2 subscale score and the BDI-II groups. Table 27 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4h is retained and main effects may be studied. Null Hypothesis 2h is retained because there is no significant difference between undergraduate and graduate students on Satisfaction Self-Concept. Null Hypothesis 3h is rejected because there is a significant difference among the BDI-II groups on Satisfaction Self-Concept.

The Scheffé test ($p = .10$) findings are that Group 1 is significantly higher than Groups 2, 3, and 4; Group 2 is significantly higher than Group 4; Group 3 is significantly higher than Group 4, and Groups 2 and 3 are not significantly different with respect to
means on the Satisfaction subscale of the TSCS:2. Thus, those who are nondepressed show significantly higher Satisfaction Self-Concept scores than those with mild, moderate, and severe depression; those with mild or moderate depression show significantly higher Satisfaction Self-Concept scores than those with severe depression; and there is no significant difference in Satisfaction Self-Concept scores between those with mild and moderate depression.

Table 26

\textit{Means Table for Satisfaction TSCS:2 Subscale Score and BDI-II Groups}

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND</td>
<td>Mild</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>79.903</td>
<td>71.091</td>
</tr>
<tr>
<td>Graduate</td>
<td>81.731</td>
<td>69.000</td>
</tr>
<tr>
<td>Total</td>
<td>80.868</td>
<td>70.095</td>
</tr>
</tbody>
</table>
Table 27

Summary of the Analysis of Variance for Satisfaction TSCS:2 Subscale and BDI-II Groups

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F'</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>5498.586</td>
<td>3</td>
<td>1832.862</td>
<td>21.210</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>3.500</td>
<td>1</td>
<td>3.500</td>
<td>.040</td>
<td>.841</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>234.995</td>
<td>3</td>
<td>78.332</td>
<td>.906</td>
<td>.439</td>
</tr>
<tr>
<td>Total</td>
<td>1497825.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.

Null Hypothesis 2, 3, 4i, Behavior subscale

Table 28 presents the means for the Behavior TSCS:2 subscale score and the BDI-II groups. Table 29 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4i is retained and main effects may be studied.

Null Hypothesis 2i is retained because there is no significant difference between undergraduate and graduate students on Behavior Self-Concept. Null Hypothesis 3i is rejected because there is a significant difference among the BDI-II groups on Behavior Self-Concept.

The Scheffe test (p = .10) findings are that Group 1 is significantly higher than Groups 2, 3, and 4; and Groups 2, 3, and 4 are not significantly different with respect to means on the Behavior subscale of the TSCS:2. Thus, those who are nondepressed show significantly higher Behavior Self-Concept scores than those

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with mild, moderate, and severe depression; and there is no significant difference in
Behavior Self-Concept scores among those with mild, moderate, and severe depression.

Table 28

Means Table for Behavior TSCS:2 Subscale Score and BDI-II Groups

<table>
<thead>
<tr>
<th>Behavior</th>
<th>BDI-II Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ND Mild Moderate Severe</td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>78.032 71.091 71.750 62.571</td>
<td>76.059</td>
</tr>
<tr>
<td>Graduate</td>
<td>79.317 70.200 67.600 69.000</td>
<td>77.983</td>
</tr>
<tr>
<td>Total</td>
<td>78.711 70.667 70.154 63.375</td>
<td>77.025</td>
</tr>
</tbody>
</table>

Table 29

Summary of the Analysis of Variance for Behavior TSCS:2 Subscale and BDI-II Groups

<table>
<thead>
<tr>
<th>Behavior</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>2478.556</td>
<td>3</td>
<td>826.185</td>
<td>14.707</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>4.254</td>
<td>1</td>
<td>4.254</td>
<td>.076</td>
<td>.783</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>129.270</td>
<td>3</td>
<td>43.090</td>
<td>.767</td>
<td>.514</td>
</tr>
<tr>
<td>Total</td>
<td>1434619.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.
Null Hypothesis 2, 3, 4j, Total scale

Table 30 presents the means for the Total TSCS:2 scale score and the BDI-II groups. Table 31 presents a summary of the analysis of variance. As there is no significant interaction, Null Hypothesis 4j is retained and main effects may be studied. Null Hypothesis 2j is retained because there is no significant difference between undergraduate and graduate students on Total Self-Concept. Null Hypothesis 3j is rejected because there is a significant difference among the BDI-II groups on Total Self-Concept.

The Scheffe test ($p = .10$) findings are that Group 1 is significantly higher than Groups 2, 3, and 4; Group 2 is significantly higher than Group 4; Group 3 is significantly higher than Group 4; and Groups 2 and 3 are not significantly different with respect to means on the Total subscale of the TSCS:2. Thus, those who are nondepressed show significantly higher Total Self-Concept scores than those with mild, moderate, and severe depression; those with mild or moderate depression show significantly higher Total Self-Concept scores than those with severe depression; and there is no significant difference in Total Self-Concept scores between those with mild and moderate depression.
Table 30

Means Table for Total TSCS:2 Score and BDI-II Groups

<table>
<thead>
<tr>
<th>Total BDI-II Groups</th>
<th>ND</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>295.280</td>
<td>274.909</td>
<td>267.000</td>
<td>220.857</td>
<td>287.118</td>
</tr>
<tr>
<td>Graduate</td>
<td>301.462</td>
<td>270.500</td>
<td>262.000</td>
<td>256.000</td>
<td>296.858</td>
</tr>
<tr>
<td>Total</td>
<td>298.543</td>
<td>272.810</td>
<td>265.077</td>
<td>225.250</td>
<td>292.008</td>
</tr>
</tbody>
</table>

Table 31

Summary of the Analysis of Variance for Total TSCS:2 Score and BDI-II Groups

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II Groups</td>
<td>34681.809</td>
<td>3</td>
<td>11560.603</td>
<td>19.031</td>
<td>.000*</td>
</tr>
<tr>
<td>Program Level</td>
<td>606.631</td>
<td>1</td>
<td>606.631</td>
<td>.999</td>
<td>.319</td>
</tr>
<tr>
<td>Program x BDI-II</td>
<td>1634.709</td>
<td>3</td>
<td>544.903</td>
<td>.897</td>
<td>.443</td>
</tr>
<tr>
<td>Total</td>
<td>20583960.000</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p = .05.
Null Hypothesis 5

There is no linear combination of the nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II groups for undergraduate students.

Null Hypothesis 5 was tested by discriminant analysis. The Behavior TSCS:2 subscale was not included because it did not pass the tolerance test which meant it was not making a significant contribution. There are two significant functions.

Function 1 Null Hypothesis 5

Table 32 presents the means for the BDI-II groups on Function 1. Table 33 presents the standardized discriminant function coefficients of the remaining eight variables. Following a common convention, I have considered those variables whose weights are at least 50\% of the maximum weight. These are then ranked 1 to 4. These findings indicate that a randomly selected undergraduate student who scores high in Identity and Satisfaction and low in Moral and Social is more likely to be in BDI-II Group 1 or 2 than in the other groups and more likely to be in Group 3 than Group 4. Thus, any undergraduate student who has high Identity Self-Concept scores, high Satisfaction Self-Concept scores, low Moral Self-Concept scores, and low Social Self-Concept scores is more likely to be nondepressed or to be experiencing mild depression than moderate and severe depression and more likely to be experiencing moderate depression than severe depression.
Table 32

Function 1 Null Hypothesis 5

<table>
<thead>
<tr>
<th>Groups</th>
<th>IV (−3.4)</th>
<th>III (−1.6)</th>
<th>II (0)</th>
<th>I (.40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>-3</td>
<td>-2</td>
<td>-1</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 33

Standardized Discriminant Function Coefficients Null Hypothesis 5-Function 1

<table>
<thead>
<tr>
<th>TSCS:2 Subscales</th>
<th>Function 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>-.162</td>
</tr>
<tr>
<td>Moral</td>
<td>-.539 (3)</td>
</tr>
<tr>
<td>Personal</td>
<td>.312</td>
</tr>
<tr>
<td>Family</td>
<td>-.033</td>
</tr>
<tr>
<td>Social</td>
<td>-.439 (4)</td>
</tr>
<tr>
<td>Academic/Work</td>
<td>.049</td>
</tr>
<tr>
<td>Identity</td>
<td>.895 (1)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>.632 (2)</td>
</tr>
</tbody>
</table>
Function 2 Null Hypothesis 5

Table 34 presents the means for the BDI-II groups on Function 2. Table 35 presents the standardized discriminant function coefficients of the remaining eight variables. Following a common convention, I have considered those variables whose weights are at least 50% of the maximum weight. These are then ranked 1 to 2. These findings indicate that a randomly selected undergraduate student who scores low on Identity and high on Physical is more likely to be in BDI-II Group 3 than the other groups and more likely to be in Group 1 than in Groups 2 or 4. Thus, any undergraduate student who has low Identity Self-Concept scores and high Physical Self-Concept scores is more likely to experience moderate depression than to be nondepressed or to be experiencing mild or severe depression and more likely to be nondepressed than experiencing mild or severe depression.

Table 34

*Function 2 Null Hypothesis 5*

<table>
<thead>
<tr>
<th>Groups</th>
<th>II</th>
<th>IV</th>
<th>I</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(-.86)</td>
<td>(-.64)</td>
<td>(0)</td>
<td>(1.3)</td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Table 35

*Standardized Discriminant Function Coefficients Null Hypothesis 5-Function 2*

<table>
<thead>
<tr>
<th>TSCS:2 Subscales</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>1.191 (2)</td>
</tr>
<tr>
<td>Moral</td>
<td>.543</td>
</tr>
<tr>
<td>Personal</td>
<td>-.483</td>
</tr>
<tr>
<td>Family</td>
<td>.347</td>
</tr>
<tr>
<td>Social</td>
<td>.238</td>
</tr>
<tr>
<td>Academic/Work</td>
<td>.565</td>
</tr>
<tr>
<td>Identity</td>
<td>-1.386 (1)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>.022</td>
</tr>
</tbody>
</table>

**Null Hypothesis 6**

There is no linear combination of the nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II groups for graduate students.

Null Hypothesis 6 was tested by discriminant analysis. The Behavior TSCS:2 subscale was not included because it did not pass the tolerance test which meant it was not making a significant contribution. There is one significant function. Again, used BDI-II Groups 1, 2, and 3 only because Group 4 had only one subject.
Function 1 Null Hypothesis 6

Table 36 presents the means for the BDI-II groups on Function 1. Table 37 presents the standardized discriminant function coefficients of the remaining eight variables. Following a common convention, I have considered those variables whose weights are at least 50% of the maximum weight. These are then ranked 1 to 8. These findings indicate that a randomly selected graduate student who scores high on Moral, Family, Physical, low on Identity, Social, Academic/Work, and high on Personal and Satisfaction is more likely to be in BDI-II Group 1 than in Groups 2 and 3. Thus, any graduate student who has high Moral Self-Concept scores, high Family Self-Concept scores, high Physical Self-Concept scores, low Identity Self-Concept scores, low Social Self-Concept scores, low Academic/Work Self-Concept scores, high Personal Self-Concept scores, and high Satisfaction Self-Concept scores is more likely to be nondepressed than to be experiencing mild and moderate depression.

Table 36

*Function 1 Null Hypothesis 6*

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean (Groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>(-2.2)</td>
</tr>
<tr>
<td>II</td>
<td>(-1.6)</td>
</tr>
<tr>
<td>I</td>
<td>(.25)</td>
</tr>
</tbody>
</table>

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Table 37

*Standardized Discriminant Function Coefficients Null Hypothesis 6-Function 1*

<table>
<thead>
<tr>
<th>TSCS.2 Subscales</th>
<th>Function 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>.522 (3)</td>
</tr>
<tr>
<td>Moral</td>
<td>.554 (1)</td>
</tr>
<tr>
<td>Personal</td>
<td>.335 (7)</td>
</tr>
<tr>
<td>Family</td>
<td>.525 (2)</td>
</tr>
<tr>
<td>Social</td>
<td>-.427 (5)</td>
</tr>
<tr>
<td>Academic/Work</td>
<td>-.419 (6)</td>
</tr>
<tr>
<td>Identity</td>
<td>-.513 (4)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>.296 (8)</td>
</tr>
</tbody>
</table>

**Summary of Hypothesis Testing**

Six null hypotheses were examined in this study. Null Hypothesis 1 studied the difference between undergraduate and graduate students with respect to the scores on the BDI-II and indicated that undergraduate students demonstrated higher mean depression scores than the graduate students on the BDI-II when the raw scores were compared. There was, however, no significant difference found between the proportion of undergraduate and graduate students in each BDI-II group. In other words, although the four depression groups contained the same number of undergraduate and graduate
students, the undergraduates received higher mean depression scores.

Null Hypotheses 2, 3, and 4 are presented together. Except for TSCS:2 subscale g, Identity, there was no significant interaction found (Null Hypothesis 4). No significant differences of undergraduate and graduate students on level of self-concept were found (Null Hypothesis 2). Significant differences between the self-concept of subjects at different depression groups were found (Null Hypothesis 3).

Null Hypotheses 2-4a, c, h, and j (Physical, Personal, Satisfaction, and Total) showed results that were identical. Those who were nondepressed received significantly higher Physical, Personal, Satisfaction, and Total Self-Concept scores than those with mild, moderate, and severe depression; those with mild or moderate depression received significantly higher Physical, Personal, Satisfaction, and Total Self-Concept scores than those with severe depression; and there was no significant difference found in Physical, Personal, Satisfaction, and Total Self-Concept scores between those with mild and moderate depression.

Null Hypotheses 2-4b and i (Moral, Behavior) showed results that were identical. Those who were nondepressed received significantly higher Moral and Behavior Self-Concept scores than those with mild, moderate, and severe depression; and there was no significant difference found in Moral and Behavior Self-Concept scores among those with mild, moderate, and severe depression.

Null Hypotheses 2-4d (Family) showed that those who were nondepressed received significantly higher Family Self-Concept scores than those with mild, moderate, and severe depression; those with mild depression received significantly higher Family Self-Concept
scores than those with severe depression; there was no significant difference found in Family Self-Concept scores between those with mild and moderate depression; and there was no significant difference found in Family Self-Concept scores between those with moderate and severe depression.

Null Hypotheses 2-4e (Social) showed that those who were nondepressed received significantly higher Social Self-Concept scores than those with mild and severe depression; there was no significant difference found in Social Self-Concept scores between those who were nondepressed and those with moderate depression; and there was no significant difference found in Social Self-Concept scores among those with mild, moderate, and severe depression.

Null Hypotheses 2-4f (Academic/Work) showed that those who were nondepressed and those with mild and moderate depression received significantly higher Academic/Work Self-Concept scores than those with severe depression; and there was no significant difference found in Academic/Work Self-Concept scores among those who were nondepressed and those with mild and moderate depression.

Null Hypotheses 2-4g (Identity) showed that those undergraduate students who were nondepressed or those with mild depression received significantly higher Identity Self-Concept scores than those with moderate and severe depression; those with moderate depression received significantly higher Identity Self-Concept scores than those with severe depression; and there was no significant difference found in Identity Self-Concept scores between those who were nondepressed and those with mild depression. For graduate students, those who were nondepressed received significantly higher Identity
Self-Concept scores than those with mild depression; there was no significant difference found in Identity Self-Concept scores between those who were nondepressed and those with moderate depression; and there was no significant difference found in Identity Self-Concept scores between those with mild and moderate depression. Also, for each of the first three BDI-II groups (minimal, mild, and moderate) there was no significant difference found in Identity Self-Concept scores between undergraduate and graduate students for those who were nondepressed and those with mild and moderate depression.

Null Hypothesis 5 showed that any undergraduate student who had high Identity Self-Concept scores, high Satisfaction Self-Concept scores, low Moral Self-Concept scores, and low Social Self-Concept scores was more likely to be nondepressed or to be experiencing mild depression than moderate and severe depression and more likely to be experiencing moderate depression than severe depression. Also, any undergraduate student who had low Identity Self-Concept scores and high Physical Self-Concept scores was more likely to be experiencing moderate depression than to be nondepressed or experiencing mild or severe depression and more likely to be nondepressed than to be experiencing mild or severe depression.

Null Hypothesis 6 showed that any graduate student who had high Moral Self-Concept scores, high Family Self-Concept scores, high Physical Self-Concept scores, low Identity Self-Concept scores, low Social Self-Concept scores, low Academic/Work Self-Concept scores, high Personal Self-Concept scores, and high Satisfaction Self-Concept scores was more likely to be nondepressed than to be experiencing mild and moderate depression.
CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Introduction

This chapter first summarizes the problem, purpose of the study, significance of the study, methodology, and demographics. The next section is organized under the four research questions of Chapter I. Under each question, the relevant hypotheses are stated and the results are summarized and discussed. Finally, the conclusions are drawn, recommendations are made for further research, and implications are made for practice.

Summary

Problem

Research is well represented on the topics of self-concept and depression, individually and together. After reviewing the current literature, few specific studies have been noted that explore the potential differences in undergraduate and graduate students in relation to their level of self-concept and level of depression. Starting college or graduate school is a time of transition and students have an opportunity for personal growth as they learn more about themselves and the world around them. But this opportunity for personal growth can be colored by their level of self-concept and depression. If students have low...
self-concept and/or symptoms of depression, then they may have trouble being in this new environment, making new friends, concentrating on school, making personal and career choices, and/or making commitments to lifetime goals (Berzonsky & Kuk, 2000; Clark & Beck, 1999; Felix, 2000; Grayson & Meilman, 1999; National DMDA, 2000; NIH, 2000a).

Universities can take an important step in offering excellent care for their students in the university counseling center. A university might incorporate an evaluation of self-concept and depression into the screening process of incoming undergraduate and graduate students via the counseling center as a type of anticipatory intervention program. Identified students struggling with low self-concept and/or symptoms of depression might receive individual therapy, group therapy, and/or training through workshops to aid in increasing the level of self-concept and lowering symptoms of depression. Another form of an anticipatory intervention program, if a screening process is not utilized, might be for psychologists to provide workshops and seminars for students on a range of topics such as personal, social, and academic issues, self-concept, and depression. These types of anticipatory intervention programs could assist individuals in building a more positive sense of self and lowering symptoms of depression so they can be more productive in school and in life (Beeber, 1999; Gladieux & Swail, 2000; Hermon & Hazler, 1999; O’Connor, 2001; Rundle, 2000).

**Purpose of the Study**

The purpose of this study is to compare undergraduate and graduate students with respect to their level of self-concept and level of depression.
Significance of the Study

Students enter an university setting from a fast-paced society that tends to demand a strong sense of self and a feeling of competency. Throughout the different stages in life, individuals examine the question “Who am I?” Changes in their lives, such as moving away from home, starting college or graduate school, exploring new values, and/or making new friends can trigger a period of re-examination of the self. Individuals view the entire world through their filter of self which influences all of their thoughts, feelings, and behaviors. This filter of self is a persons’ self-concept and contains the beliefs about your personal worth, characteristics, and roles. Individuals with a high level self-concept tend to think well of themselves and others, value relationships with others, more easily accept differences in others, obtain a higher level of performance in the academic setting, and have lower levels of hopelessness and depression (Chang, 2000; Clark & Beck, 1999; Dunning, 1993; Fitts & Warren, 1996; Hattie & Marsh, 1996; Felix, 2000; Magen, 1998; Rosenberg, 1985).

As mentioned above, persons with a high level of positive self-concept tend to have lower levels of hopelessness and depression. This is an important point because the literature shows that self-concept and depression are interrelated and intertwined. During times of depression, most individuals begin to set unrealistic standards, make self-belittling remarks, or make harsh judgments about themselves. Often these events lead them to see themselves as basically worthless, hopeless, and inadequate. One’s level of self-concept and depression influences areas such as relationships, academic achievement, choosing to obtain a graduate level of education, choosing a career, and/or making

Depression is a topic that is discussed many times without connecting it necessarily to self-concept. In fact, depression is called "the common cold of mental health." Depression often starts with mild symptoms in late adolescence/young adulthood and, with time, may slowly increase in the level of severity. So, persons with mild depressive symptoms tend to be at a higher risk for developing more severe depression. Even if individuals are experiencing mild depressive symptoms which do not meet specific diagnostic criteria for a mood disorder, their ability to function may be hindered in areas such as relationships with others, physical health, academic/work performance, making personal and career choices, and feelings of self-worth. If left untreated, these mild symptoms may persistently recur and may eventually build a lifelong pattern of depressive symptoms and/or pattern of major depression. So, it is vital that the symptoms of mild depression be acknowledged and addressed before they become more persistent (American Psychiatric Association, 2000; Beck, 1967, 1972, 1973, 1976; Feaster, 1996; Felix, 2000; Hattie, 1992; Johnson, 2001; NIH, 2000a, 2000b; NIMH, 1995, 1997, 1999, 2000).

Methodology

This study used a quantitative research design for an ex post facto study of the differences between undergraduate and graduate students with respect to their level of self-concept and level of depression. The population for this study consisted of undergraduate and graduate students (N = 239) from Andrews University (AU) and
Western Michigan University (WMU). The sample was a convenience sample which was obtained by asking various professors from different departments permission to administer the research packet (the Demographic Questionnaire, the Tennessee Self-Concept Scale: Second Edition [TSCS:2], and the Beck Depression Inventory-II [BDI-II]) to the students in each of their classes. Data collection was accomplished by the use of three instruments: (1) the Demographic Questionnaire, (2) the Tennessee Self-Concept Scale (TSCS:2), and (3) the Beck Depression Inventory-II (BDI-II).

**Demographics**

Regarding the demographics, the majority of the participants were female (58.6%), the majority of the participants were single (63.2%) and 30.5% were married, just over 50% (50.6) of the participants were Caucasian, 13% were Asian Origin, and 10.9% were African American, and the majority of the participants were Protestant (69.4%) and 17.6% reported "other" as their religion. Almost half of the participants (49.8%) were between the ages of 18-24 and 29.7% were between the ages of 25-34 with approximately the same number (50%) of undergraduate and graduate students. The findings also indicated that 40.2% of the participants reported a GPA that fell between the range of 3.9-3.5 and 29.7% of the participants that reported their GPA to be between 3.4-3.0.

**Discussion of the Results**

The results of this study are organized under the four research questions of Chapter I. Under each question, the relevant hypotheses are stated and the results are summarized and discussed.
Research Question 1

Research Question 1. Do undergraduate and graduate students differ in respect to the level of depression?

Research Question 1 was answered by looking at Null Hypothesis 1. Null Hypothesis 1 stated that there is no significant difference between undergraduate and graduate students with respect to the scores on the BDI-II. This hypothesis studied the difference between undergraduate and graduate students with respect to the scores on the BDI-II by using $t$-test for means of independent samples. The independent variable was program level and the dependent variable was depression scores. Additionally, chi-square analysis was used to compare the proportion of undergraduate and graduate students at the four BDI-II groups. The independent variable was program level and the dependent variable was depression groups.

The results of this study answered yes to Research Question 1. When comparing group means, the results indicated that undergraduate students demonstrated higher mean depression scores than the graduate students. The finding that undergraduate students demonstrated higher mean depression scores than graduate students was consistent with authors such as Anderson and Hayes (1996), Hoge (1999), and Steer et al. (1999). However, when the depression groups were compared, there were no significant differences found between the proportion of undergraduate and graduate students in each BDI-II group. Using the BDI-II cut score of 13 to identify depression, the prevalence of depression found for the combined undergraduate and graduate students was as follows: (1) a total of 197 participants or 82.4% were nondepressed; (2) a total of 21 participants or
8.8% demonstrated mild symptoms of depression; (3) a total of 13 participants or 5.4% demonstrated moderate symptoms of depression, and (4) a total of 8 participants or 3.3% demonstrated severe symptoms of depression.

Undergraduate students tend to be at a time in life that is full of uncertainty, transition, and change. Typically, they are separated from their family of origin, family values, long-time friends, church family, teachers, and community while simultaneously exploring new surroundings, people, places, values, behaviors, activities, opportunities, and themselves. Professionals in the field (Arnett, 2000; Calhoun et al., 2001; Erikson, 1959, 1968) have discussed these transitions and changes as being universal and a normal part of the life-cycle—"normal crisis points."

According to Berzonsky and Kuk (2000), Byrne (1996a), and Trusty et al. (2000), this time of transition and change can be part of the reason that undergraduate students have higher mean depression scores. I would like to also suggest that peer pressure is a big part of this time of uncertainty, transition, and change for undergraduate students. Undergraduate students pay more attention to peer pressure because they are not so far removed from high school when the most significant group influencing their lives was the peer group. If they do not fit in with the new peer group in college or they are pressured to go against what they have been taught earlier, they are more uncertain about who they are, what direction they are headed, and which values they want to embrace or discard. These factors may contribute to undergraduate students having higher mean depression scores.

In comparison, graduate students tend to have often already experienced many of the same types of transitions and changes that undergraduate students are currently facing.
Perhaps having already experienced these transitions and changes, graduate students have a stronger sense of self and direction which may lend itself in assisting graduate students to have a lower mean depression score than undergraduate students. The fact that some of the graduate students also experience some symptoms of depression suggests that growth throughout the various stages in life is an ongoing process. Obviously, graduate students are at a different stage in the life-cycle than undergraduate students. They tend to have developed a comfortable level of self-acceptance and their own value system so that they are no longer as strongly influenced by peer pressure. Graduate students tend to have more life experience and maturity and are able to handle situations more effectively. This additional life experience and maturity is what possibly leads graduate students to be more resilient to transitions and changes throughout the various stages in life. This resiliency may contribute to the mean depression scores being less severe for graduate students.

**Research Question 2**

Research Question 2. Do undergraduate and graduate students differ in respect to the level of self-concept?

Research Question 2 was answered by looking at Null Hypothesis 2 and was studied with univariate analysis (two-way ANOVA). Null Hypothesis 2 stated there is no significant difference between the undergraduate and graduate students with respect to the mean scores on the TSCS:2. The independent variable was program level and the dependent variables was self-concept.

The results of this study answered no to Research Question 2. The results of this
study indicated, when looking at Null Hypothesis 2, that there were no significant differences in the level of self-concept found between the undergraduate and graduate students. Thus, Null Hypotheses 2a-j were retained because there were no significant differences found.

Research Question 3

*Research Question 3.* Do students at different depression levels differ in the level of self-concept?

Research Question 3 was answered by first looking at Null Hypothesis 3 and then Null Hypotheses 5 and 6. Null Hypothesis 3 was studied with univariate analysis (two-way ANOVA) and Null Hypotheses 5 and 6 were studied with multivariate analysis (discriminant analysis). The independent variable was depression group and the dependent variable was self-concept.

Null Hypothesis 3 stated there is no significant difference among the four BDI-II groups with respect to the mean scores on the TSCS:2. Null Hypothesis 5 stated there is no linear combination of the nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II groups for undergraduate students. Null Hypothesis 6 stated there is no linear combination of the nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II groups for graduate students.

The results of this study answered yes to Research Question 3. The results of this study indicated, when looking at Null Hypothesis 3, that there were significant differences found between the self-concept of students at different depression groups. Thus, Null
Hypotheses 3a-j were rejected because there were significant differences found between the self-concept of students at different depression groups.

Null Hypothesis 3a (Physical) indicated that those who were nondepressed received significantly higher Physical Self-Concept scores than those with mild, moderate, and severe depression; those with mild or moderate depression received significantly higher Physical Self-Concept scores than those with severe depression; and there was no significant difference found in Physical Self-Concept scores between those with mild and moderate depression. These results suggest that when individuals are nondepressed the more positive they feel about their body image, appearance, and physical capabilities. In addition, these results suggest that the less depressed individuals are, the more positive they feel about their body image, appearance, and physical capabilities, or vice-a-versa.

Null Hypothesis 3b (Moral) indicated that those who were nondepressed received significantly higher Moral Self-Concept scores than those with mild, moderate, and severe depression; and there was no significant difference found in Moral Self-Concept scores received among those with mild, moderate, and severe depression. These results suggest that when individuals are nondepressed the more positive they view their conduct and their values of right and wrong than those with mild, moderate, and severe symptoms of depression.

Null Hypothesis 3c (Personal) indicated that those who were nondepressed received significantly higher Personal Self-Concept scores than those with mild, moderate, and severe depression; those with mild or moderate depression received significantly higher Personal Self-Concept scores than those with severe depression; and there was no
significant difference found in Personal Self-Concept scores between those with mild and moderate depression. These results suggest that when individuals are nondepressed the more positive they feel about themselves and their sense of personal worth. In addition, these results suggest that the less depressed individuals are, the more positive they feel about themselves and their sense of personal worth, or vice-a-versa.

Null Hypothesis 3d (Family) indicated that those who were nondepressed received significantly higher Family Self-Concept scores than those with mild, moderate, and severe depression; those with mild depression received significantly higher Family Self-Concept scores than those with severe depression; there was no significant difference found in Family Self-Concept scores between those with mild and moderate depression or between those with moderate and severe depression. These results suggest that when individuals are nondepressed the more they feel accepted and valued in their families as compared to those with mild, moderate, and severe symptoms of depression. These results also suggest that those with mild symptoms of depression tend to feel more accepted and valued in their families than those with severe symptoms of depression.

Null Hypothesis 3e (Social) indicated that those who were nondepressed received significantly higher Social Self-Concept scores than those with mild and severe depression. Also, there was no significant difference found in Social Self-Concept scores between those who were nondepressed and those with moderate depression or between those with mild, moderate, or severe depression. These results suggest that when individuals are nondepressed the more positive they view themselves as a valued and competent member of society than those with mild or severe symptoms of depression.
Null Hypothesis 3f (Academic/Work) indicated that those who were nondepressed and those with mild and moderate depression received significantly higher Academic/Work Self-Concept scores than those with severe depression; and there was no significant difference found in Academic/Work Self-Concept scores among those who were nondepressed and those with mild and moderate depression. These results suggest that when individuals are nondepressed or when they are experiencing mild and moderate symptoms of depression the more positively they view themselves as self-assured and capable at school or work than those with severe symptoms of depression. Interestingly enough, this scale was the only one that showed a significantly lower Academic/Work Self-Concept score only once a person was experiencing severe symptoms of depression.

Null Hypotheses 2-4g (Identity) indicated that those undergraduate students who are nondepressed or those with mild depression show significantly higher Identity Self-Concept scores than those with moderate and severe depression; those with moderate depression show significantly higher Identity Self-Concept scores than those with severe depression; and there is no significant difference in Identity Self-Concept scores between those who are nondepressed and those with mild depression. The results suggest the less depressed undergraduate students are, the more positive they feel about their sense of self. Also, undergraduate students that are experiencing moderate symptoms of depression feel more positive about their sense of self than those with severe symptoms of depression.

Also for Identity, graduate students who are nondepressed show significantly higher Identity Self-Concept scores than those with mild depression; there is no significant
difference in Identity Self-Concept scores between those who are nondepressed and those with moderate depression; and there is no significant difference in Identity Self-Concept scores between those with mild and moderate depression. The results suggest that graduate students who are nondepressed view their sense of self in a more positive manner than those with mild symptoms of depression. When comparing undergraduate and graduate students for each of the first three depression groups (minimal, mild, and moderate), there is no significant difference in Identity Self-Concept scores between undergraduate and graduate students for those who are nondepressed and those with mild and moderate depression. The results suggest that, when comparing undergraduate and graduate students, there is no significant difference in any depression level in the way they viewed their sense of self.

Null Hypothesis 3h (Satisfaction) indicated that those who were nondepressed received significantly higher Satisfaction Self-Concept scores than those with mild, moderate, and severe depression; those with mild or moderate depression received significantly higher Satisfaction Self-Concept scores than those with severe depression; and there was no significant difference found in Satisfaction Self-Concept scores between those with mild and moderate depression. These results suggest that when individuals are nondepressed the more they feel content, accepting, and satisfied with themselves. In addition, these results suggest that the less depressed individuals are, the more they feel content, accepting, and satisfied with themselves, or vice-a-versa.

Null Hypothesis 3i (Behavior) indicated that those who were nondepressed received a significantly higher Behavior Self-Concept score than those with mild,
moderate, and severe depression; and there was no significant difference found in
Behavior Self-Concept scores received among those with mild, moderate, and severe
depression. These results suggest that when individuals are nondepressed the more positive
they view their actions and behavior than those with mild, moderate, and severe symptoms
of depression.

Null Hypothesis 3j (Total) indicated that those who were nondepressed received
significantly higher Total Self-Concept scores than those with mild, moderate, and severe
depression; those with mild or moderate depression received significantly higher Total
Self-Concept scores than those with severe depression; and there was no significant
difference found in Total Self-Concept scores between those with mild and moderate
depression. These results suggest that when individuals are nondepressed the more positive
they feel about their overall self-concept and level of self-esteem. In addition, these results
suggest that the less depressed individuals are, the more positive they feel about their
overall self-concept and level of self-esteem, or vice-a-versa.

The second way in which Research Question 3 was answered was by looking at
Null Hypothesis 5. Again, Null Hypothesis 5 stated there is no linear combination of the
nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II
groups for undergraduate students. The independent variable was TSCS:2 scores and the
dependent variable was BDI-II group.

The results of Null Hypothesis 5 found that any undergraduate student, who had
high Identity Self-Concept scores, high Satisfaction Self-Concept scores, low Moral
Self-Concept scores, and low Social Self-Concept scores, was more likely to be
nondepressed or to be experiencing mild depression than moderate and severe depression and more likely to be experiencing moderate depression than severe depression. The results suggest that undergraduate students, with the above mentioned self-concept scores, are more likely to experience less depression.

For undergraduate students, this time in life is often when they start reassessing their own value systems. Up until this point, they have often just embraced the value system of their parents. Many changes also tend to be occurring outside and inside of themselves such as moving away from home, creating a new peer group, and deciding what goals they have for their lives. Undergraduate students may have a core sense of identity and satisfaction with who they are at this point in time while still not be so sure of who they are morally or socially. This state of confusion in the moral and social self-concept areas may just be a “normal” stage in life and is not necessarily pathological. It appears that if they have a good sense of who they are and are satisfied with who they are, this outweighs, or at least counterbalances, the turmoil in the areas of their moral and social value systems.

It is important for psychologists to know that if undergraduate students do not have a good sense of who they are and are not satisfied with who they are, this would probably lead to more symptoms of depression than if dealing with the turmoil in their moral or social values. So, it appears very important that their sense of identity and satisfaction be strengthened or maintained as a goal for therapy.

The results of Null Hypothesis 5 also found that any undergraduate student who had low Identity Self-Concept scores and high Physical Self-Concept scores was more
likely to be experiencing moderate depression than to be nondepressed or to be experiencing mild or severe depression and more likely to be nondepressed than to be experiencing mild or severe depression. These results suggest that undergraduate students with the above mentioned self-concept scores, are more likely to experience moderate symptoms of depression than to be nondepressed or to be experiencing mild or severe symptoms of depression. These results also suggest that undergraduate students, with the above mentioned self-concept scores, are more likely to be nondepressed than to be experiencing mild or severe symptoms of depression.

It appears that if undergraduate students have a low sense of identity but feel really good about their body, they might experience some symptoms of depression but will not tend to experience severe symptoms of depression. At this time in life for undergraduate students, much emphasis and importance is placed on their external looks, how in shape their body is, and how well their body performs. It might be that this external emphasis is so strong now that it outweighs the uncertainty of not knowing who they are on the inside and keeps severe depression at bay, at least for the time being.

The third way in which Research Question 3 was answered was by looking at Null Hypothesis 6. Again, Null Hypothesis 6 stated there is no linear combination of the nine TSCS:2 subscale scores which significantly discriminates among the four BDI-II groups for graduate students (used Groups 1, 2, and 3 only because Group 4 had only one case). The independent variable was TSCS:2 scores and the dependent variable was BDI-II group.
When looking at Null Hypothesis 6, the results from this sample suggest that any graduate student who had high Moral, Family, Physical Self-Concept scores and low Identity, Social, Academic/Work Self-Concept scores, and high Personal and Satisfaction Self-Concept scores was more likely to be nondepressed than to be experiencing mild and moderate depression. These results suggest that graduate students, with the above mentioned self-concept scores, are more likely to be nondepressed than to be experiencing mild and moderate symptoms of depression. These results suggest that, for graduate students, combinations of self-concept subscale scores appear to be significant but the reason for such results is uncertain.

Research Question 4

*Research Question 4. Is the relationship between self-concept and depression different for undergraduate and graduate students?*

Research Question 4 was answered by looking at Null Hypothesis 4. Null Hypothesis 4 was studied with univariate analysis (two-way ANOVA). Null Hypothesis 4 stated there is no significant interaction between program level and BDI-II group. Null Hypotheses 4a-j (except g) were retained and main effects were studied because there were no significant interactions found between the program level and BDI-II group. The independent variables were program level and depression group and the dependent variable was self-concept.

The results of this study answered no, with one exception, to Research Question 4. The exception was Identity Self-Concept (g) because there was a significant interaction.
found between the program level and BDI-II group so simple effects were studied. Thus, for Identity only, the relationship between the level of self-concept and depression is different for undergraduate and graduate students.

For undergraduate students, those who were nondepressed or those with mild depression received significantly higher Identity Self-Concept scores than those with moderate and severe depression; those with moderate depression received significantly higher Identity Self-Concept scores than those with severe depression; and there was no significant difference found in Identity Self-Concept scores between those who were nondepressed and those with mild depression. These results suggest that undergraduate students who are nondepressed or those experiencing mild symptoms of depression view their sense of self in a more positive manner than those with moderate or severe symptoms of depression. Also, those who are experiencing moderate symptoms of depression feel more positive about their sense of self than those experiencing severe symptoms of depression.

For graduate students (with the severe depression group omitted), those who were nondepressed received significantly higher Identity Self-Concept scores than those with mild depression; there was no significant difference found in Identity Self-Concept scores between those who were nondepressed and those with moderate depression; and there was no significant difference found in Identity Self-Concept scores between those with mild and moderate depression. These results suggest that graduate students who are nondepressed view their sense of self in a more positive manner than those with mild symptoms of depression. Thus, for Identity Self-Concept only, the
relationship between self-concept and depression is different for undergraduate and graduate students.

Conclusions

Even though the literature is clear on the relationship between self-concept and depression, few studies take into consideration the population of undergraduate and graduate students. This study did that and found the following:

1. In regard to depression, there is a significant difference in the level of depression between undergraduate and graduate students. Undergraduate students had higher mean depression scores or a higher level of overall depression than graduate students. However, when the depression groups are compared, there are no significant differences found between the proportion of undergraduate and graduate students in each BDI-II group. Interestingly enough, with combining undergraduate and graduate students and using the BDI-II cut scores of 13 to identity depression, my results showed that 82.4% of my sample were nondepressed which left only approximately 17.5% of my sample experiencing mild to severe symptoms of depression. This finding does not agree with the prevailing literature which says that mild depression is on the rise, depression is often the leading emotional disorder on today’s university campuses, and college students tend to experience clinical depression and dysthymia twice as often as working individuals of similar ages and background environments (American Psychiatric Association, 2000; NIMH, 1999; NIH, 2000b).

In exploring the results that the majority of my sample were nondepressed, some
of my demographic results might shed some light or present some possible options for this finding. In my sample, 81% of the combined undergraduate and graduate students had a GPA of 3.0 or higher. GPA often plays an important factor in the life of undergraduate and graduate students. Persons with a high GPA tend to more likely be nondepressed than those students struggling with a low GPA. Those students with a low GPA may tend to have more symptoms of depression. Another finding of my sample was 80% of the combined undergraduate and graduate students were between the ages of 18-34. Furthermore, 63.2% of the combined undergraduate and graduate students were single and 30.5% were married.

2. In regard to self-concept, there is no significant difference found in the level of self-concept between undergraduate and graduate students.

3. In regard to differences between the self-concept of students at different depression groups, there are significant differences found. In general, the overall trend is when undergraduate and graduate students are nondepressed and/or the less depressed undergraduate and graduate students are then, the better they feel about themselves. Conversely, the more depressed undergraduate and graduate students are the worse they feel about themselves.

4. In regard to the relationship between self-concept and depression, for Identity Self-Concept only, the relationship between self-concept and depression is different for undergraduate and graduate students.

5. The results of this study further support the literature that suggests self-concept and depression are interrelated.
Recommendations

Next, recommendations made from this study for future research might be the following:

1. Replication of this study using a larger sample to test the consistency of findings observed in this research project.

2. Replication of this study with subjects randomly selected and a more diverse sampling of areas such as age group, ethnic origin, marital status, religion, and geographic location would allow greater generalization of findings.

3. Further study of the content of depression and the different life stressors/issues that may trigger depression, especially between undergraduate and graduate students.

4. A longitudinal study with a larger sample to further investigate the different issues that may trigger depression throughout the different life stages.

5. Further investigation into the different issues that may trigger depression comparing high school students and undergraduate students.

6. Further study of the relationship between maturational factors and the level of self-concept and depression.

Implications

Last, implications for practice might be the following:

1. Psychologists in the university counseling center might utilize what Beeber (1999) calls anticipatory intervention programs. These anticipatory intervention programs might include an evaluation of self-concept and depression in the screening process of incoming undergraduate and graduate students. Identified students struggling with low
self-concept and/or symptoms of depression might receive individual therapy, group therapy, and/or training through workshops to aid in increasing the level of self-concept and lowering symptoms of depression. Another form of an anticipatory intervention program, if a screening process is not utilized, might be for psychologists to provide workshops and seminars for undergraduate and graduate students on a range of topics in areas such as personal, social, and academic issues, self-concept, and depression. These types of anticipatory intervention programs could assist individuals in building a more positive sense of self so they can be more productive in school and in life (Gladieux & Swail, 2000; Hermon & Hazier, 1999; O'Connor, 2001; Rundle, 2000).

2. Psychologists can be aware that it is vitally important to evaluate, diagnose, and treat depressive symptoms, especially in university students, to prevent potential problems in academic, social, and behavioral areas. Psychologists can help them explore their intrapersonal issues, relationships with others, career interests, and skills in areas such as time-management, study, stress management, social, and decision-making. Students can take some time to examine these issues and decrease their level of depression or symptoms of depression and increase their level of self-concept. This lowering of depression or symptoms of depression and building a more positive sense of self can aid the students to be more productive in school and life (Astin, 1993; Dornbusch, 2000; Paul & Brier, 2001).

3. The results of this study suggest that therapeutic goals for students, undergraduate or graduate, with symptoms of depression would be similar, for example, in terms of a strengthening a positive sense of self and/or lowering or eliminating symptoms of depression.
Appendix A

AUTHORIZATION TO PERFORM STUDY
October 4, 2000

Ann Woolley
9026 Sunset Dr. #2
Berrien Springs, MI 49103

Dear Ann:

RE: APPLICATION FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

HSRB Protocol #: 00-01: 423  Application Type: Original  Dept: Ed & Couns Psyc - 0104
Review Category: Exempt  Action Taken: Approved
Protocol Title: Differences Among Undergraduate and Graduate Students in Self-Concept and Depression.

On behalf of the Human Subjects Review Board (HSRB) I want to advise you that your proposal has been reviewed and approved. You have been given clearance to proceed with your research plans.

All changes made to the study design and/or consent form, after initiation of the project, require prior approval from the HSRB before such changes can be implemented. Feel free to contact our office if you have any questions.

The duration of the present approval is for one year. If your research is going to take more than one year, you must apply for an extension of your approval in order to be authorized to continue with this project.

Some proposal and research design designs may be of such a nature that participation in the project may involve certain risks to human subjects. If your project is one of this nature and in the implementation of your project an incidence occurs which results in a research-related adverse reaction and/or physical injury, such an occurrence must be reported immediately in writing to the Human Subjects Review Board. Any project-related physical injury must also be reported immediately to the University physician, Dr. Loren Hamel, by calling (616) 473-2222.

We wish you success as you implement the research project as outlined in the approved protocol.

Sincerely,

Linda Thorman, Ed.D.
Human Subjects Review Board
c: Nancy Carbonell
Date: 20 November 2000

To: Nancy J. Carbonell, Principal Investigator
   Ann L. Woolley, Student Investigator for dissertation

From: Michael Pritchard, Interim Chair

Re: HSIRB Project Number: 00-Carbonell/Woolley (Andrews University)

This letter will serve as confirmation that your research project entitled “Differences Among Undergraduate and Graduate Students in Self-Concept and Depression” has been reviewed under the exempt category of review by the Human Subjects Institutional Review Board. Before final approval can be given the following revisions must be submitted for HSIRB review:

1. In the research procedure section of the protocol outline (page 3):
   - Responses will be anonymous. Please remove the word confidential (here and throughout your protocol—pages 6, 7, 8).
   - You say, “Those that do not wish to participate may leave the room now and I will let you know when we are finished.” Please revise this procedure. Those who choose not to participate may return blank forms. They should stay in their seats.

2. Subject selection section of the protocol (page 6)
   - Please revise as above.

3. Informed consent process section of the protocol outline:
   - Please revise as in 1.
   - Add “to each student” so your first sentence reads, . . . (research packet) to each student and I will say the following . . . .”

4. As you know, you will need a WMU contact person.

Please submit one copy of the above changes in writing to the HSIRB, 327E Walwood Hall (East Campus). Remember to include the HSIRB project number (above) and to mark the changes within the document. To avoid delays, please do not send revisions addressed to me. Revisions should be submitted within the next month.

Conducting this research without final approval from the HSIRB is a violation of university policy as well as state and federal regulations.

If you have any questions, please call the research compliance coordinator at 387-8293.
Date: January 12, 2001

To: Nancy J. Carbonell, Principal Investigator
   Ann Woolley, Student Investigator for dissertation
   Robert Brinkerhoff, WMU contact

From: Michael S. Pritchard, Interim Chair

Re: HSIRB Project Number 00 Carbonell/Wooley Andrews

This letter will serve as confirmation that your research project entitled "Differences Among Undergraduate and Graduate Students in Self-Concept and Depression" has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: January 12, 2002
Project Description:

Purpose of the Study

The purpose of this study is to compare undergraduate and graduate students with respect to their level of self-concept and depression. Students enter a university setting from a fast-paced society that tends to demand a strong sense of self and a feeling of competency. Along with developmental changes, such as leaving home, making new friends, and starting an undergraduate/graduate program, come questions surrounding one's sense of self. One's level of self-concept influences areas such as relationships, academic achievement, choosing a career, and/or choosing to obtain a graduate level of education. At the same time, feelings of depression affect areas such as relationships, academic achievement, feelings of self-worth, and choosing a career. Research has demonstrated that the onset of depression is occurring earlier than between the ages of 30-40 as once was accepted. Today, the generally accepted idea is depression often starts with mild symptoms in late adolescence/young adulthood and, with time, slowly increases in the level of severity. Depression also tends to have a high recurrence rate. Persons with mild depressive symptoms tend to be at a higher risk for developing more severe depression. If left untreated, these mild symptoms persistently recur and eventually build a lifelong pattern of depression.

It is important to evaluate, diagnose, and treat mild depressive symptoms, especially in university students, to prevent problems in academic, social, and behavioral areas. The university administration, being aware of the importance of early detection and treatment, could work with the counseling center to aid in developing programs, workshops, seminars, and therapy services for students. These types of services could aid with increasing enrollment, decreasing attrition, and improving academic performance. It might also benefit psychologists, especially in the university counseling centers, to assist students in increasing the level of self-concept and lowering depression. This lowering of depression and building a more positive sense of self can aid the students to be more productive in school and life.

Research Procedure

During Fall Semester 2000, I will apply to Andrews University's (AU) Human Subjects Review Board (HSRB) for permission to conduct this research study. After HSRB approval from AU is obtained, a copy of this HSRB approval and the completed Western Michigan University (WMU) application for Human Subjects Institutional Review Board...
(HSIRB) will be sent to WMU. While awaiting HSIRB approval from WMU, classes will be chosen from the Fall 2000/Winter 2001 catalogs from AU and WMU on the undergraduate and/or graduate level. Each professor of the selected class at AU will be contacted, informed of the research study, and asked to participate. Class times will be scheduled for me to meet the class and collect the data. After HSIRB approval from WMU, each professor of the selected class at WMU will be contacted, informed of the research study, and asked to participate. Class times will be scheduled for me to meet the class and collect the data.

I will, at the agreed upon date, meet with each instructor and class. At the beginning of my scheduled time, I will distribute one manila envelope (research packet) to each student and I will say the following: "My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which basically looks at what people think about themselves and what people feel about themselves, their world, and their future. I am here today to ask for your participation in this research study which will take about 20 minutes to complete three research instruments. Your name or identification (ID) number will not be used in any way so your responses will be anonymous. I want to emphasize that your participation in this study is completely voluntary. If you choose to not participate, you will not be penalized in any way. If you choose to participate, you are still free to withdraw at any time during the testing process without any penalty. I do not anticipate anything happening but, for example, if answering any of the questions brings up thoughts and feelings and/or issues for you, I recommend that you contact the counseling center office here at Andrews/Western to talk with someone. Are there any questions? Those who choose to not participate may return the blank forms and stay in your seats. So, let's get started. I'd like you to use a pen, if possible, to complete the instruments."

Then, as I hold up my copy of the Demographic Questionnaire, I will ask each student to take out the first page of the research packet which is the Demographic Questionnaire. I will then ask the students to read the instructions, ask any questions, and then complete the Demographic Questionnaire which will take a minute or less. Next, as I hold up my copy of the Tennessee Self-Concept Scale: Second Edition (TSCS:2), I will ask them to take out the second page of the research packet which is the TSCS:2. I will remind them to not fill in any identifying information but read the instructions, ask any questions, and then complete the TSCS:2 which will take about 12 minutes. I will instruct them that when they are through with the first page of the TSCS:2, which takes approximately 6 minutes, to just turn it over without tearing off anything and complete the second page. Next, as I hold up my copy of the Beck Depression Inventory-II (BDI-II), each student will be asked to look at the last page of the research packet which is the BDI-II. Again, they will be reminded to not fill in any identifying information but read the instructions, ask any questions, and complete the instrument which will take 2-5 minutes. After completion of the BDI-II, I will ask the students to return the three research instruments to the manila envelope, seal it, and give it to me. I will then thank them for their participation.

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Research Design

A quantitative research design will be used for an ex post facto study of the differences between undergraduate students and graduate students with respect to their level of self-concept and level of depression.

Location and Duration

Classes will be chosen from the Fall 2000/Winter 2001 catalogs from AU and WMU on the undergraduate and/or graduate level. Collection of data will be conducted during the period of October 2000 to May 2001.

Benefits of Research:

Students have an opportunity for personal growth as they learn about themselves and the world around them. But this opportunity for personal growth can be colored by their level of self-concept and depression. Numerous students drop out of higher education for various reasons and can’t seem to “find themselves” throughout life. With added insight, psychologists and universities can greatly influence and assist students in their personal and professional growth. Students who participate and complete the research instruments may take the opportunity to examine their thoughts/feelings and reflect on themselves as individuals and their life goals. This examination might also encourage them to talk to someone in the university’s counseling center about their issues and/or life goals.

A university might incorporate an evaluation of self-concept and depression into the screening process of incoming undergraduate and graduate students via the counseling center. Identified students struggling with low self-concept and/or depression might receive individual therapy, group therapy, and/or training through workshops to aid in increasing the level of self-concept and lowering levels of depression. This type of counseling and/or training would assist these individuals in building a more positive sense of self.

Subject Selection:

During Fall Semester 2000, I will apply to Andrews University’s (AU) Human Subjects Review Board (HSRB) for permission to conduct this research study. After HSRB approval from AU is obtained, a copy of this HSRB approval and the completed Western Michigan University (WMU) application for Human Subjects Institutional Review Board (HSIRB) will be sent to WMU. While awaiting HSIRB approval from WMU, classes will be chosen from the Fall 2000/Winter 2001 catalogs from AU and WMU on the undergraduate and/or graduate level. Each professor of the selected class at AU will be contacted, informed of the research study, and asked to participate. Class times will be scheduled for me to meet the class and collect the data. After HSIRB approval from
WMU. Each professor of the selected class at WMU will be contacted, informed of the research study, and asked to participate. Class times will be scheduled for me to meet the class and collect the data.

I will, at the agreed upon date, meet with each instructor and class. At the beginning of my scheduled time, I will distribute one manila envelope (research packet) to each student and I will say the following: "My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which basically looks at what people think about themselves and what people feel about themselves, their world, and their future. I am here today to ask for your participation in this research study which will take about 20 minutes to complete three research instruments. Your name or identification (ID) number will not be used in any way so your responses will be anonymous. I want to emphasize that your participation in this study is completely voluntary. If you choose to not participate, you will not be penalized in any way. If you choose to participate, you are still free to withdraw at any time during the testing process without any penalty. I do not anticipate anything happening but, for example, if answering any of the questions brings up thoughts and feelings and/or issues for you, I recommend that you contact the counseling center office here at Andrews/Western to talk with someone. Are there any questions? Those who choose to not participate may return the blank forms and stay in your seats. So, let's get started. I'd like you to use a pen, if possible, to complete the instruments."

**Risks to Subjects:**

The only noted possible risks for subjects might include answering the questions of the TSCS:2 and the BDI-II which brings up thoughts/feelings for them. Subjects will be advised to talk with someone in AU's or WMU's counseling center if they want to discuss their issues with someone.

**Protection for Subjects:**

The subjects names or identification (ID) numbers will not be used in any way so their responses will be anonymous. The participation in this study is completely voluntary. If they choose to not participate, they will not be penalized. If they choose to participate, they are still free to withdraw at any time during the testing process without any penalty. If answering any of the questions brings up thoughts and feelings and/or issues for them, it will recommended that they contact their school's counseling center to talk with someone.

**Confidentiality of Data:**

The name or identification (ID) number of each student will not be used in any way so the responses will be anonymous. The coding procedures for subject identification
numbers will be to start with 001 and place on all three instruments in the first research packet and proceed with subsequent numbering until the final subject’s research packet is coded.

**Instrumentation:**

Data collection will be accomplished by the use of three instruments: (1) the Demographic Questionnaire, (2) the Tennessee Self-Concept Scale (TSCS:2), and (3) the Beck Depression Inventory-II (BDI-II). The Demographic Questionnaire, which I constructed, requests information concerning gender, age group, marital status, ethnic origin, current program level, GPA, and religion. Instructions will ask the participants to check the appropriate box in response to each question. The Demographic Questionnaire requires less than one minute to complete (see attached sheet). The TSCS:2 and the BDI-II are reliable and valid instruments that have been used widely in research. Copies of these instruments are not attached but can be gladly given upon request.

**Informed Consent Process:**

At the beginning of my scheduled time, I will distribute one manila envelope (research packet) to each student and I will say the following: “My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which basically looks at what people think about themselves and what people feel about themselves, their world, and their future. I am here today to ask for your participation in this research study which will take about 20 minutes to complete three research instruments. Your name or identification (ID) number will not be used in any way so your responses will be anonymous. I want to emphasize that your participation in this study is completely voluntary. If you choose to not participate, you will not be penalized in any way. If you choose to participate, you are still free to withdraw at any time during the testing process without any penalty. I do not anticipate anything happening but, for example, if answering any of the questions brings up thoughts and feelings and or issues for you, I recommend that you contact the counseling center here at Andrews/Western to talk with someone. Are there any questions? Those who choose to not participate may return the blank forms and stay in your seats. So, let’s get started....”
Memorandum of Discount Authorization

DATE: October 4, 2000
TO: Ann L. Woolley
    9026 Sunset Drive, #2
    Berrien Springs, MI 49103
REF.: Your fax yesterday
STUDY: Doctoral research through Andrews University - Examining and comparing the relationship between self-concept and depression

CONDITIONS:

1. The discount is to be applied against the current, single-unit catalog price for any related product number.
2. The discount is not retroactive, but may be applied against your research orders effective immediately, until discount authorization expires as indicated above. A copy of this memorandum of discount authorization must accompany your orders (if placing a credit card order by phone, please be ready to refer to the date of this memorandum).
3. No reproduction, adaptation or translation of the materials may be made in any format, for any purpose, without our prior written permission.
4. All materials must be used ethically and for the purposes and in the manner for which they were intended.
5. In exchange for receiving our Research Discount, you agree to provide WPS with one copy of all articles (including theses, dissertations, research reports, convention papers, journal submissions, etc.) that use data from our instrument(s) as collected in the above-described research. Please mark the articles to the attention of the WPS Research Coordinator. WPS reserves the right to use any such data; you will of course receive proper acknowledgment if we use your research results.
6. This memorandum does not serve as a price quote or as a guarantee of availability; for more information, please contact WPS Customer Service at (800) 648-8857.

We look forward to learning of the results of your study. If you have any questions, please contact Ms. Susan Dunn Weinberg at WPS.

* NOTE: Discounted purchase of the WPS TEST REPORT FAX Service requires special arrangements with a WPS TEST REPORT Representative. Please call WPS TEST REPORT (800-648-8857; Monday - Friday, 7:30 a.m. - 4:30 p.m. Pacific Time) for details.
January 6, 2000

Ms. Ann L. Woolley
9026 Sunset Drive #2
Berrien Springs, MI 49103

Dear Ms. Woolley:

Thank you for your letter concerning your use of the Beck Depression Inventory®: Second Edition (BDI®-II) in your dissertation research to explore the relationship between self-concept and depression in approximately 1000 graduate students.

As a responsible test publisher, we believe it is our duty to protect the security and integrity of our test instruments. Therefore, we cannot allow copies of the test to be included with or stapled in your dissertation. However, two actual test items from the BDI®-II may be included. If you use two items, please be sure the copyright notice appears with the items along with the words "Reproduced by permission of the publisher, The Psychological Corporation." Also, all testing must be conducted in your presence or that of another qualified individual so that all test materials remain secure.

We will gladly grant permission for the use of this test instrument if the above restrictions will be followed. Please indicate your agreement to these terms by signing and returning this letter for our files. When you have returned the signed letter, you may contact Shirley Elizondo in Customer Service at (800) 228-0752, ext. 5427, to order your test materials. If you have already placed an order, it will be released upon receipt of this signed letter. As a student, you are eligible for a 50% discount on these materials; however, you must pay for the order yourself and request the discount at the time you place the order.

Also, please forward a copy of your final dissertation for our library.

Thank you for your interest in our test materials. If you have further questions or needs, please contact us. Good luck with your research.

Sincerely,

Catherine Amaro Baker
Contract Specialist
Legal Affairs

AGREED:

[Signature]

Catherine Amaro Baker
Contract Specialist
Legal Affairs
January 6, 2000

Ms. Ann L. Woolley
9026 Sunset Drive #2
Berrien Springs, MI 49103

Dear Ms. Woolley:

Thank you for your letter concerning your use of the Beck Depression Inventory \(^*\), Second Edition (BDI\(^*-II\)) in your dissertation research to explore the relationship between self-concept and depression in approximately 1000 graduate students.

As a responsible test publisher, we believe it is our duty to protect the security and integrity of our test instruments. Therefore, we cannot allow copies of the test to be included with or stapled in your dissertation. However, two actual test items from the BDI\(^*-II\) may be included. If you use two items, please be sure the copyright notice appears with the items along with the words “Reproduced by permission of the publisher, The Psychological Corporation.”

Also, all testing must be conducted in your presence or that of another qualified individual so that all test materials remain secure.

We will gladly grant permission for the use of this test instrument if the above restrictions will be followed. Please indicate your agreement to these terms by signing and returning this letter for our files. When you have returned the signed letter, you may contact Shirley Elizondo in Customer Service at (800) 228-0752, ext. 5427, to order your test materials. If you have already placed an order, it will be released upon receipt of this signed letter. As a student, you are eligible for a 50% discount on these materials; however, you must pay for the order yourself and request the discount at the time you place the order.

Also, please forward a copy of your final dissertation for our library.

Thank you for your interest in our test materials. If you have further questions or needs, please contact us. Good luck with your research.

Sincerely,

Catherine Amato Baker
Contract Specialist
Legal Affairs

AGREED:

[Signature]

Catherine Amaro Baker
Contract Specialist
Legal Affairs
Appendix B

CORRESPONDENCE
October 28, 1999

Western Psychological Services
Attn. Ann Wineberg
12031 Wilshire Blvd.
Los Angeles, CA 90025

RE: Use of the Tennessee Self-Concept Scale

To whom it may concern:

One of my doctoral students, who is currently working on her dissertation, Ann Woolley, is interested in using one of your instruments for her study, which is the Tennessee Self-Concept Scale. Please be informed that I will be supervising her usage of the instrument and all other aspects of her research. I am an Associate Professor at Andrews University and a fully licensed Psychologist in the state of Michigan.

Thank you for facilitating Ann’s purchase and use of this assessment tool.

Sincerely,

Nancy J. Carbonell, Ph.D.
Andrews University
Educational and Counseling Psychology Department
Berrien Springs, MI 49104

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Dear Ms. Weinberg:

This letter is a request to use the Tennessee Self-Concept Scale-2nd edition as an instrument in my doctoral dissertation research. This study will explore the relationship between self-concept and depression. This study will also explore the question do graduate students differ in the level of self-concept and depression as compared to undergraduate students. After approval from the Human Subjects Review Boards, I plan to gather my data in January and February of 2000. At this point in time, I am planning to have a sample size of approximately 300 students. The results will be distributed to my dissertation committee and then published in my Ph.D. dissertation.

Thank you for assisting me in purchasing and utilizing the Tennessee Self-Concept Scale-2nd edition in my doctoral research.

Sincerely,

Ann L. Woolley
Ph.D. Candidate
Andrews University
Berrien Springs, MI 49104
November 18, 1999

Erna Acuna
The Psychological Corporation
555 Academic Court
San Antonio, Texas 78204

RE: Use of the Beck Depression Inventory

To whom it may concern.

One of my doctoral students, who is currently working on her dissertation, Ann Woolley, is interested in using one of your instruments for her study, which is the Beck Depression Inventory. Please be informed that I will be supervising her usage of the instrument and all other aspects of her research. I am an Associate Professor at Andrews University and a fully licensed Psychologist in the state of Michigan.

Thank you for facilitating Ann's purchase and use of this assessment tool.

Sincerely,

Nancy J. Carbonell, Ph.D.
Andrews University
Educational and Counseling Psychology Department
Berrien Springs, MI 49104
Ann L. Woolley  
9026 Sunset Drive #2  
Berrien Springs, MI 49103  
(616) 471-9315

Ema Acuna  
The Psychological Corporation  
555 Academic Court  
San Antonio, Texas 78204  
(800) 211-8378  
Fax (888) 200-4880

January 04, 2000

RE: Use of the Beck Depression Inventory

Dear Ms. Acuna:

This letter is a request to use the Beck Depression Inventory-II as an instrument in my doctoral dissertation research. This study will explore the relationship between self-concept and depression. This study will also explore the question do graduate students differ in the level of self-concept and depression as compared to undergraduate students. After approval from the Human Subjects Review Boards, I plan to gather my data in February-May of 2000. At this point in time, I am planning to have a sample size of approximately 1,000 students. I will hand out the instrument to a specified class and collect it at the end of that class period. The results will be distributed to my dissertation committee and then published in my Ph.D. dissertation.

Thank you for assisting me in purchasing and utilizing the Beck Depression Inventory-II in my doctoral research.

Sincerely,

Ann L. Woolley  
Ph.D. Candidate  
Andrews University  
Berrien Springs, MI 49104
NOTE: As in my original letter, dated 1-04-00, I requested permission to use the BD1-II in my doctoral dissertation with graduate and undergraduate students. The letter of permission, in the first paragraph, only states graduate students. I want to make sure this wording will not be a problem in the future. Thank you
Dear Dr. ________________

Thank you for agreeing to allow me to meet with your class on ____________ at ____________ to distribute my research instruments. Enclosed is a copy of my Human Subjects Review Board Letter of Approval for your records. Again, this will take approximately 20 minutes. I certainly appreciate your time and assistance.

Sincerely,

Ann L. Woolley
Dear Dr. __________,

Thank you so much for graciously allowing me to come into your class on __________ to distribute my research instruments. I certainly appreciated your time and assistance. I hope you and your family have a wonderful holiday season.

Sincerely,

Ann L. Woolley
Ann L. Woolley
9026 Sunset Drive #2
Berrien Springs, MI 49103
(616) 471-9315

__________________ . Ph.D.
3102 Sangren Hall
Western Michigan University
Kalamazoo, MI 49008

12-27-00

Dear Dr. ____________,

My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which is exploring the differences among undergraduate and graduate students in self-concept and depression.

I have been working with the Research Compliance Coordinator, Victoria Janson, and have obtained permission from Dr. Joe Morris to contact you. My Human Subjects Institutional Review Board (HSIRB) application has been completed and everything is in order except for my obtaining a Western Michigan University (WMU) faculty member to be my contact person (HSIRB Project Number 00 - Carbonell/Woolley (Andrews University)). The faculty member does not actually have any responsibilities other than agreeing to be the contact person and being aware that I am gathering data at WMU. The contact person would be the individual I would speak with in case any problems occur while I am collecting the data. I have already gathered data at Andrews University without any problems. So, I certainly do not anticipate any problems while collecting data at WMU.

Enclosed is a copy of my HSIRB application for your review. This will give you an overview of what is involved in my research. If you have any questions about this request, please contact the Research Compliance Coordinator: Victoria Janson (387-8293), Office of the Vice President for Research, 327E Walwood Hall

Thank you so much for your time. I know the Winter Semester begins on January 2 and schedules are always busy at the start of a new semester. But, I would appreciate your consideration in this matter at your earliest convenience. I hope to be able to gather my data at WMU during this upcoming semester. I look forward to hearing from you.

Sincerely,

Ann L. Woolley
Dr.
School of____________________
Western Michigan University
Kalamazoo, MI 49008

01-17-01

Dear Dr. ________________

My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which is exploring the differences among undergraduate and graduate students in self-concept and depression.

I am requesting the opportunity to meet with your class, ____________, to collect research data which will take approximately 15-20 minutes. Data collection will be accomplished by the use of three instruments: (1) the Demographic Questionnaire, (2) the Tennessee Self-Concept Scale (TSCS:2), and (3) the Beck Depression Inventory-II (BDI-II).

I hope to meet with the class in March or April at a time which is convenient for your schedule. I will call you within 1-2 weeks upon your receipt of this letter to see when we can schedule a time for me to meet with your class.

Enclosed is a copy of my Human Subjects Institutional Review Board (HSIRB) Letter of Approval for your records. If you have any questions~ feel free to contact me and/or the Research Compliance Coordinator, Victoria Janson (387-8293).

Sincerely,

Ann L. Woolley
Dear Dr. Brinkerhoff,

Thank you so very much for "going the extra mile" and agreeing to be my contact person. I appreciate your support because it allows me to move forward with my dissertation. My next step is to contact the following professors to inquire about gathering data in their classes: 1) Dr. ______- ED 601 (Intro Ed Research); 2) Dr. ________ - CECP 622 (Psy-Ed Consultation); 3) Dr. ________ - EDLD 662 (School Business Mgmt); and 4) Dr. ________ - SOC 607 (Logic & Analysis of Soc Research I).

I will correspond with you again during this entire process and keep you informed. Enclosed is a copy of my Human Subjects Institutional Review Board Letter of Approval for your records just in case you do not have a copy. Please feel free to contact me with any questions or comments. Again, thank you so much for your time.

Sincerely,

Ann L. Woolley
Dear Dr. __________,

My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which is exploring the differences among undergraduate and graduate students in self-concept and depression.

I am requesting the opportunity to meet with your class,___________, to collect research data which will take approximately 15-20 minutes. Data collection will be accomplished by the use of three instruments: (1) the Demographic Questionnaire, (2) the Tennessee Self-Concept Scale (TSCS:2), and (3) the Beck Depression Inventory-II (BDI-II).

I hope to meet with the class in March or April at a time which is convenient for your schedule. I will call you within 1-2 weeks upon your receipt of this letter to see about scheduling a time for me to meet with your class.

Enclosed is a copy of my Human Subjects Institutional Review Board (HSIRB) Letter of Approval for your records. If you have any questions, feel free to contact me and/or the Research Compliance Coordinator, Victoria Janson (387-8293).

Sincerely,

Ann L. Woolley
Dear Dr. __________,

Thank you so much for agreeing to allow me to meet with your class on __________ at __________ to distribute my research instruments. Again, this will take approximately 15-20 minutes. I certainly appreciate your time and assistance.

Sincerely,

Ann L. Woolley
Robert Brinkerhoff, Ph.D.
Western Michigan University
3102 Sangren Hall
Kalamazoo, MI 49008

03-20-01

Dear Dr. Brinkerhoff,

As just confirmed tonight, the following professors will allow me to gather data from their class(es) next week: 1) Dr. ______ - ED 601 (Intro Ed Research); 2) Dr. ______ - CECP 622 (Psy-Ed Consultation); and 3) Dr. ______ - EDLD 662 (School Business Mgmt). I had contacted several other professors which were unable to allow me to meet with their classes. So, depending on the actual numbers obtained, I may have to gather more data next semester. I just wanted to keep you informed of the progress. Again, thank you so much for being my contact person.

Sincerely,

Ann L. Woolley
Dr. _____________________
Western Michigan University
Haworth College of Business
Kalamazoo, MI 49008

03-30-01

Dear Dr. __________,

My name is Ann Woolley. I am a doctoral student in Counseling Psychology at Andrews University. I am currently working on my dissertation which is exploring the differences among undergraduate and graduate students in self-concept and depression.

I am requesting the opportunity to meet with your class, BUS 616 (Bus Policy & Soc & Ethical Envir), to collect research data which will take approximately 15-20 minutes. Data collection will be accomplished by the use of three instruments: (1) the Demographic Questionnaire, (2) the Tennessee Self-Concept Scale (TSCS:2), and (3) the Beck Depression Inventory-II (BDI-II).

I hope to meet with the class in May at a time which is convenient for your schedule. I will call you within 1 week upon your receipt of this letter to see about scheduling a possible time. Enclosed is a copy of my Human Subjects Institutional Review Board (HSIRB) Letter of Approval for your records. If you have any questions, feel free to contact me and/or the Research Compliance Coordinator, Victoria Janson (387-8293).

Sincerely,

Ann L. Woolley
Dr. __________
Western Michigan University
Sangren Hall
Kalamazoo, MI 49008

04-06-01

Dear Dr. __________,

Thank you so much for graciously allowing me to come into your classes to gather my research data. I enjoyed meeting you and talking with you. You made me feel so welcomed. I hope you enjoyed the recent break. Again, it was a pleasure meeting you and thank you for your time.

Sincerely,

Ann L. Woolley
Robert Brinkerhoff, Ph.D.
Western Michigan University
3102 Sangren Hall
Kalamazoo, MI 49008

05-01-01

Dear Dr. Brinkerhoff,

It was such a pleasure meeting you and talking with you in March. I hope you enjoyed the recent break. I wanted to let you know that the following professors have agreed to allow me to gather data from their class(es) next week: 1) Dr. __________ - BUS 616 (Bus Policy & Soc & Ethical Envir) and 2) Professor ___________ - SWRK 400 (Prac Prob Solv Proc). Again, thank you so much for taking a chance and agreeing to be my contact person. I appreciate your kindness.

Sincerely,

Ann L. Woolley
Dear Dr. __________.

Thank you so much for graciously allowing me to come into your class to gather my research data. I enjoyed meeting you and talking with you. You made me feel so welcomed. I hope you have a pleasant summer.

Sincerely,

Ann L. Woolley
Dear Dr. Brinkerhoff,

The trip in May to collect data was a success. I am now officially through with collecting my data and well on my way in analyzing it!! I could not have completed the data collection process without your help. Thank you so, so very much for being my contact person. I will always remember your kindness. Later, I will send you an abstract of my dissertation findings just for your information. Again, thank you for your time.

Sincerely,

Ann L. Woolley
Appendix C

INSTRUMENTATION
DEMOGRAPHIC QUESTIONNAIRE

Directions: Please check the appropriate box for each question.

1. Gender:  
   1. □ Male  
   2. □ Female

2. Age Group:  
   1. □ 17 or below  
   2. □ 18-24  
   3. □ 25-34  
   4. □ 35-44  
   5. □ 45-54  
   6. □ 55-64  
   7. □ 65 and over

3. Marital Status:  
   1. □ Single (Never Married)  
   2. □ Cohabited  
   3. □ Married  
   4. □ Separated/Divorced  
   5. □ Widowed

4. Ethnic Origin:  
   1. □ African American  
   2. □ African Origin  
   3. □ Asian American  
   4. □ Asian Origin  
   5. □ Caribbean Origin  
   6. □ Caucasian  
   7. □ Latino/Hispanic  
   8. □ Multiracial  
   9. □ Native American  
   10. □ Other

5. Current Program Level:  Undergraduate  
   1. □ Freshman  
   2. □ Sophomore  
   3. □ Junior  
   4. □ Senior

   Graduate  
   5. □ MA 1  
   6. □ 2  
   7. □ PhD 1  
   8. □ 2  
   9. □ 3+

6. GPA:  
   1. □ 4.0  
   2. □ 3.9-3.5  
   3. □ 3.4-3.0  
   4. □ 2.9-2.5  
   5. □ 2.4-2.0  
   6. □ 1.9-1.5  
   7. □ 1.4-1.0

7. Religion:  
   1. □ Protestant  
   2. □ Catholic  
   3. □ Jewish  
   4. □ Islamic  
   5. □ Other

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### Data Format

**Row 1**

2 Rows per student

**Columns**

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**Row 2**

**Columns**

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<td>Total of Responses to Items 1-21 of BDI-II</td>
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Class Number List

Columns 1-2 on Data Format

01 = Dr. P
02 = Dr. G
03 = Dr. M
04 = Dr. B
05 = Dr. H (A)
06 = Dr. H (B)
07 = Dr. G
08 = Dr. F
09 = Dr. W
10 = Dr. A (A)
11 = Dr. W
12 = Dr. A (B)
13 = Dr. M
14 = Dr. Mc
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VITA
ANN L. WOOLLEY

Licensure
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Registered Nurse, State of Michigan, Permanent I.D. # 4704209067, Exp. 3/31/04

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  June 1995 to March 1997; Andrews University

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  Phi Lambda Theta  Pi Gamma Mu

Bibliography